नवसाक्षर साहित्यमाला

विज्ञान के उपहार

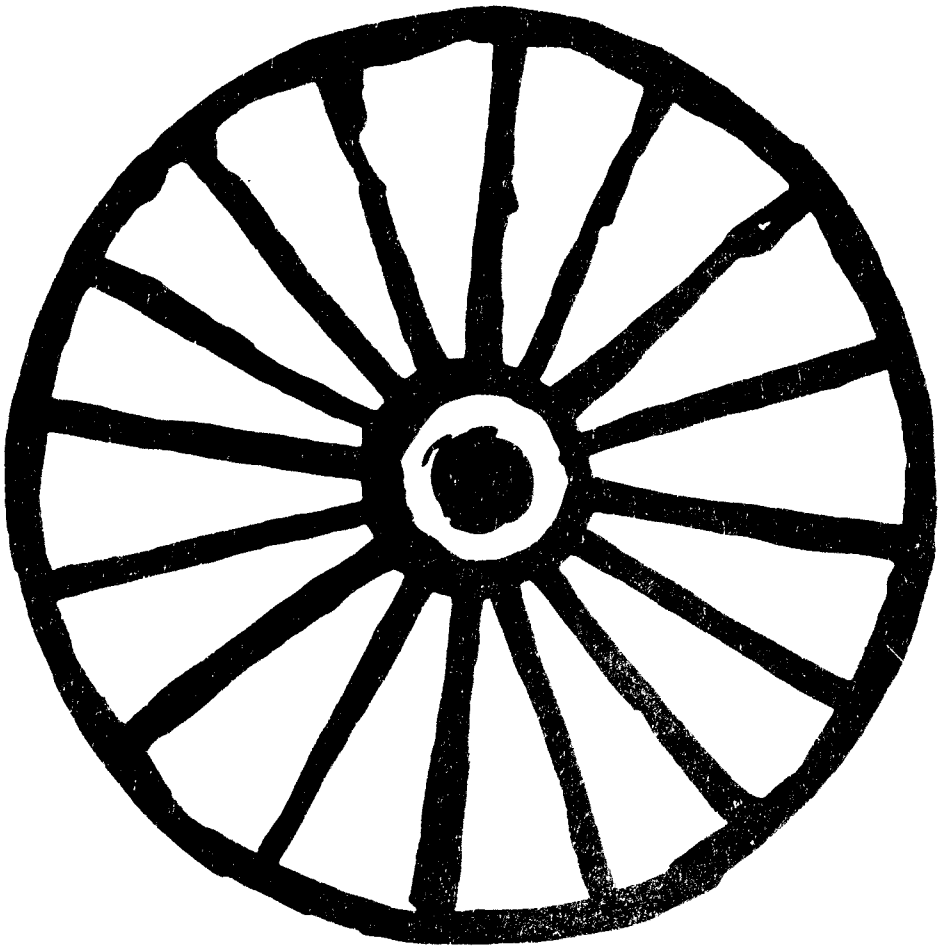
मीर नजाबत अली

रूपांतरण

सुभद्रा सालवी

चित्रांकन

अहमद

नेशनल बुक ट्रस्ट, इंडिया

पहिया

पहिया बड़े काम की चीज है । बैलगाड़ी, साइकिल, मोटर, रेलगाड़ी सभी पहियों से चलते हैं । पहिये की खोज से हमें बहुत लाभ हुआ है ।

पुराने जमाने में पहिया नहीं बना था । तब सामान लाने ले जाने में बहुत परेशानी होती थी । उस जमाने में जानवर सामान ढोते थे । आज भी हम सामान ढोने के लिए जानवरों का उपयोग करते हैं ।

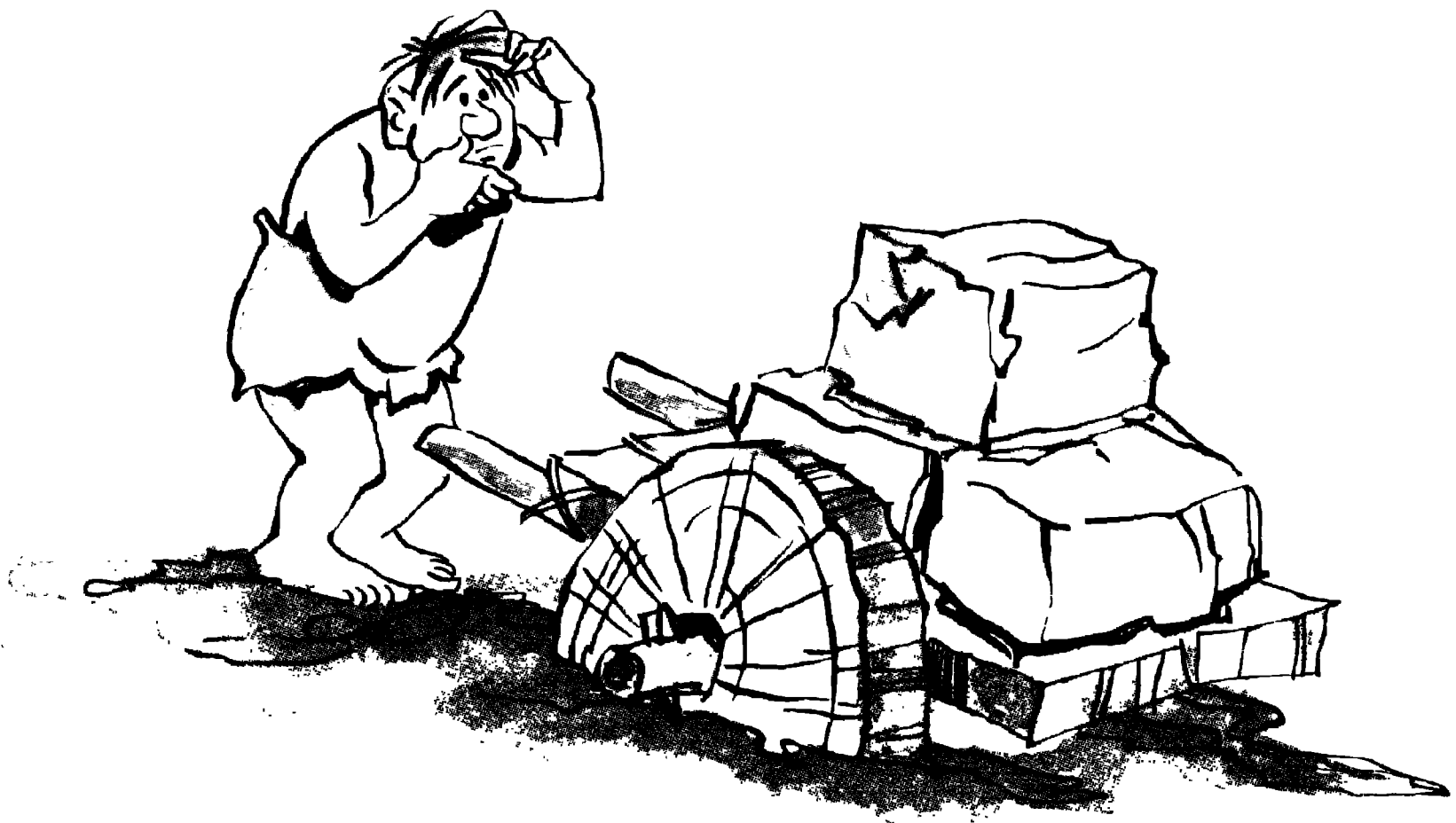
पहिये की खोज करीब पांच हजार साल पहले हुई । इसे बनाया किसने ? यह आज तक पता नहीं चला है ।

पहिया बना तो जानवरों को आराम मिला। लोगों ने उनसे सामान ढोना करीब-करीब बंद कर दिया। लेकिन घने जंगलों, पहाड़ों, रेगिस्तानों में, आज भी हम जानवरों पर सामान लादते हैं। आम तौर पर ऊंट, घोड़े, खच्चरों से सामान ढोने का काम लिया जाता है।

पहिया बनने से पहले लोग अपनी पीठ पर सामान लादकर जाते थे। तब वे लंबा सफर नहीं कर सकते थे। रास्ते में खतरे भी बहुत थे। इसलिए लोग इधर-उधर कम जाते थे।

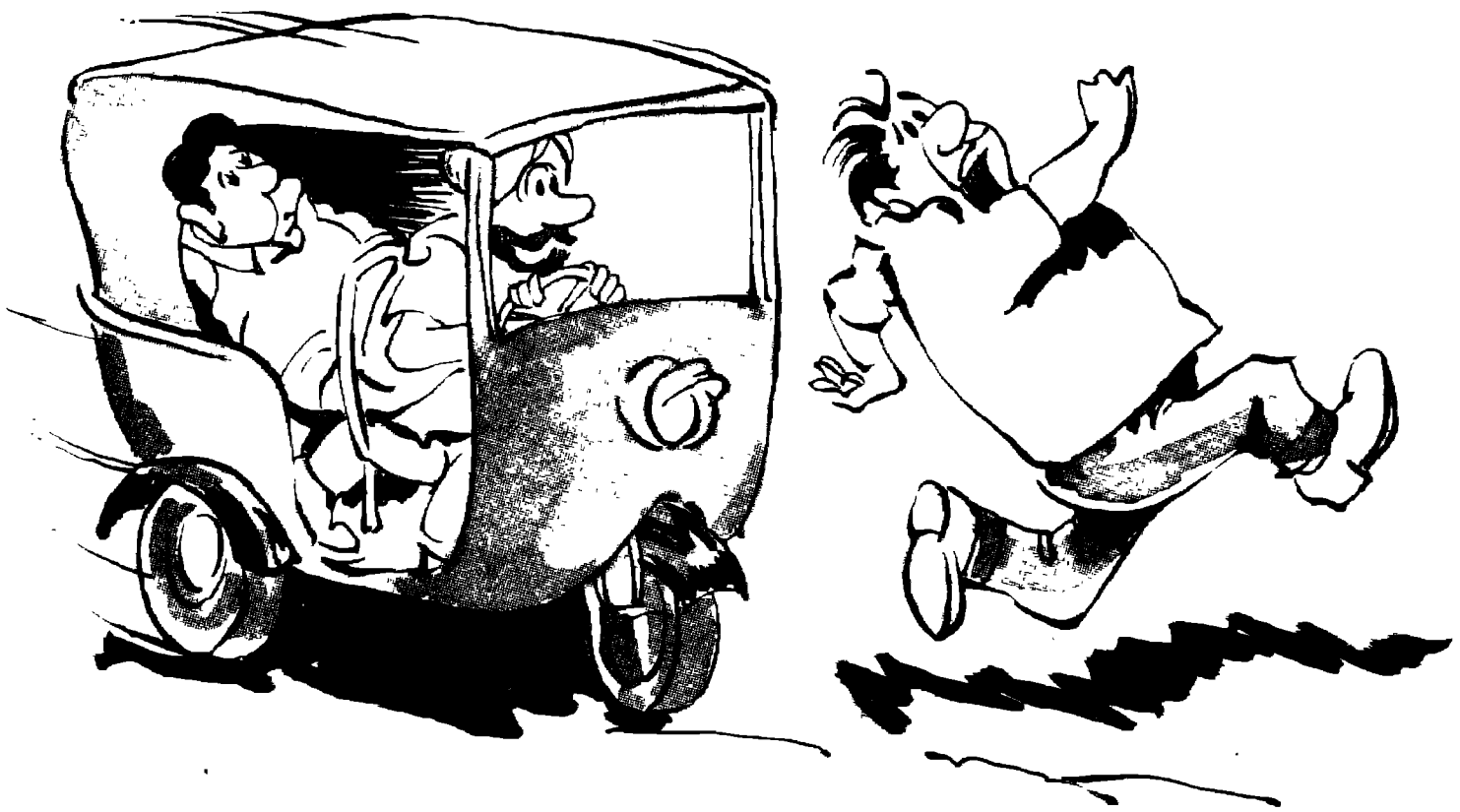
पहले लोग जंगलों में रहते थे। पालतू जानवर ही उनके साथी थे। इनमें कुत्ता बड़ा काम का जानवर था। सबसे पहले लकड़ी के पटरों को जोड़कर एक

छोटी गाड़ी बनायी । इसे कुत्ते खींचते थे, गाड़ी का नाम था स्लेज । इसके बाद बड़ी गाड़ियां बनीं । ये सामान ढोने के काम आयीं । इन गाड़ियों को ऊंट, घोड़े, बैल खींचते थे । इससे आसानी हुई । काम जल्दी होने लगा ।

सबसे पहला पहिया लकड़ी के तीन टुकड़ों को जोड़कर बनाया गया । धीरे-धीरे इसमें सुधार हुआ । किसी पेड़ का मोटा तना काटा गया । फिर उसमें से दो गोल टुकड़े काटे । उन गोलों के बीच में छेद किया । फिर लोहे की मोटी छड़ ली । इसे दोनों गोलों से जोड़ दिया । छड़ के सहारे पहिये घूमने लगे । इससे बड़ी मदद मिली । काम और जल्दी होने लगा ।

अब पहिये में और सुधार हुआ । उसे अधिक मजबूत बनाया गया । बाद में लोहे और दूसरी धातुओं की खोज हुई । लकड़ी के पहिये के चारों तरफ लोहे की पट्टी ठोंक दी । इससे पहिया और मजबूत हो गया । गाड़ी आसानी से चलने लगी । ये पहिये टूटते भी कम थे ।

सबसे पहले दो पहिये वाले हाथ ठेले बने । फिर दो पहिये वाली गाड़ी बनी । इसमें एक तरफ दो पहिये लगे रहते थे । दूसरी तरफ से आदमी गाड़ी खींचता था । कई बार दूसरी तरफ जानवर जोत देते थे । बाद में गाड़ियों में दो से अधिक पहिये लगाये गये । इस तरह बड़ी गाड़ियां बनीं ।

इन पहियेदार गाड़ियों में घोड़े जोते गये । इससे चाल और बढ़ गयी । चार पहिये वाली गाड़ी का विदेशों में चलन शुरू हुआ ।

अधिक सामान ढोने के लिए बड़े पहिये बनाने पड़े । इससे वे काफी भारी हो गये । पहिये और सामान मिलकर वजन अधिक हो गया । इसलिए पहिये

का वजन घटाना पड़ा। पहिये पर धातु की पट्टी चढ़ायी गयी। ताकि यह ज्यादा मजबूत रहे। इसके बाद अरे वाले पहिये बनने लगे। इससे पहिया अधिक हलका हो गया और आसानी से लुढ़कने लगा।

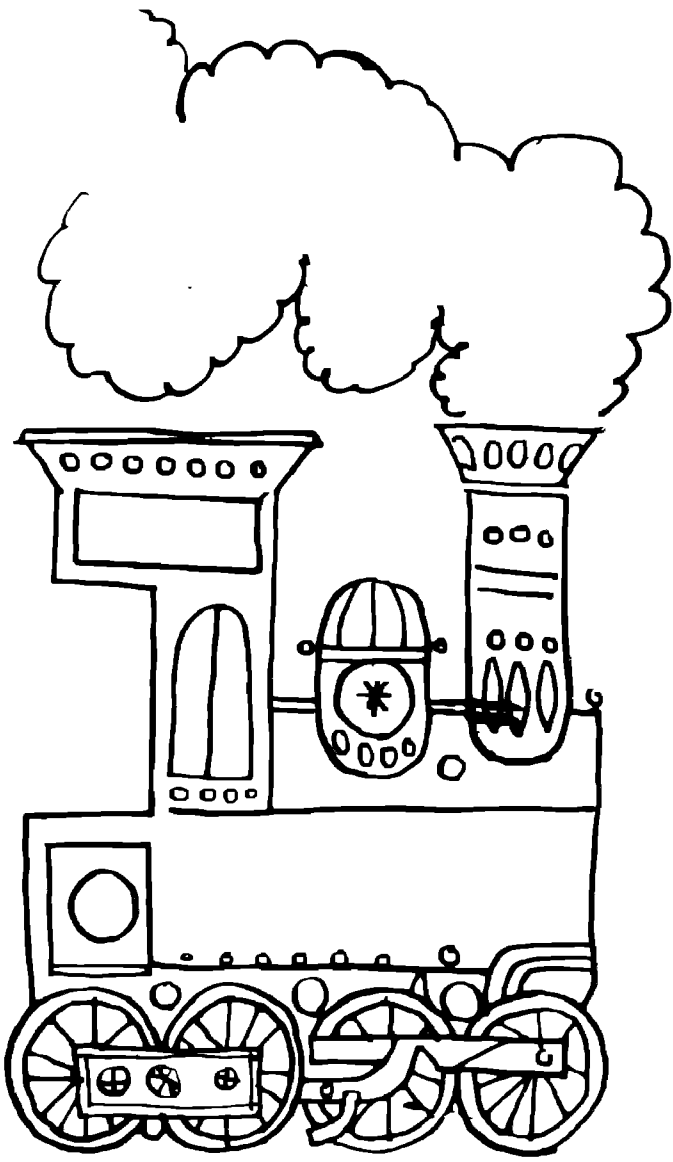
अब आयीं भारी गाड़ियां। माल ढोने के डिब्बे बने। गाड़ी चलने में आसानी हो, इसलिए सड़कें बनायी गयीं। अब गाड़ी पहले से तेज दौड़ने लगी। अमीर लोग अब इन पर सैर करने लगे। इन गाड़ियों को आरामदायक बनाया गया। सीटों पर गद्दी बना दी गयी। ये सवारी गाड़ियां कहलायीं।

मगर एक तकलीफ अब भी थी। गाड़ी चलने से झटके बहुत लगते थे। इनको बंद करना था। इसके लिए सीट के नीचे, धातु की लचकदार कमानी लगायी गयी। इससे झटके कम हो गये। लोग इन घोड़ा गाड़ियों में, एक दिन में तीस मील तक जाने लगे। जगह-जगह घोड़े बदलने का इंतजाम रहता। जहां घोड़े थक जाते, लोग रुक जाते। कुछ देर आराम कर लेते। फिर घोड़ा बदल कर आगे बढ़ जाते।

कुछ समय बाद सड़कें भी सीमेंट की बनने लगीं। पहिये और अच्छे बनने लगे। फिर भाप से चलने वाले इंजन बनने लगे। इनको रेलगाड़ी से जोड़ दिया गया। यह रेलगाड़ी पटरी पर बहुत तेज दौड़ने लगी। इंजन मोटरगाड़ी में भी लगाया गया।

मानव ने और प्रगति की। पहिये पूरी तरह धातु के अरे वाले बनने लगे। करीब सौ साल पहले विदेश में हवा भरे टायर बने। इन्हें डनलप नाम के आदमी ने बनाया। इससे झटके लगने एकदम बंद हो गये। मोटर के पहिये पर मजबूत रबर का टायर चढ़ाया गया।

जो जगह बहुत दूर लगती थी, पहिये की खोज से वह अब पास लगने लगी है। जिस जगह जाने में कई महीने लगते थे, अब वहां कुछ दिनों में ही पहुंच सकते हैं।

यह तो पता नहीं पहिया किसने बनाया? मगर जिसने भी बनाया हम उसके आभारी हैं। उसने इसे बनाकर सबका भला ही किया है।

भाप का इंजन

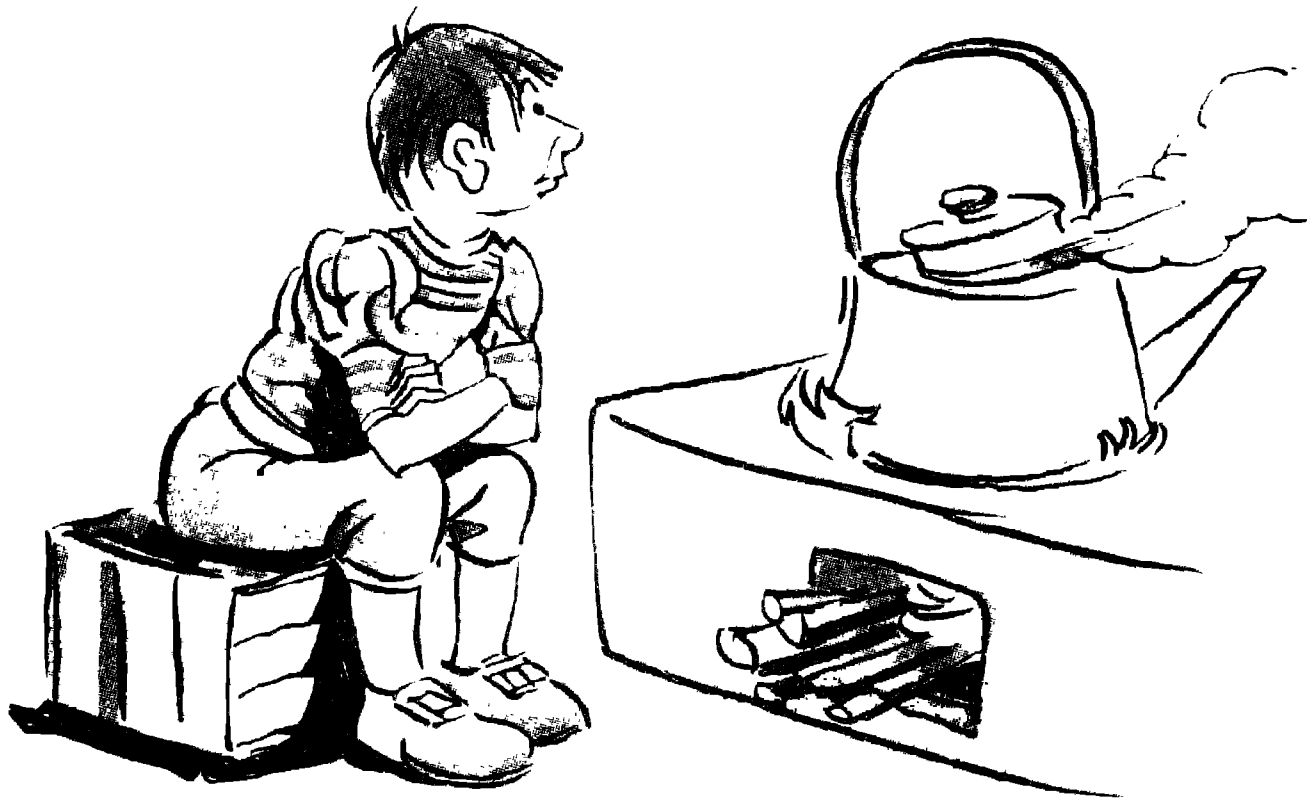
भाप की ताकत बहुत काम की है। इससे आदमी ने कई काम लिये हैं।

यह मनुष्य की बहुत बड़ी जीत है। रेलगाड़ियों के इंजन भाप की ताकत से चलते हैं। इस ताकत से कारखानों में मशीनें चलती हैं।

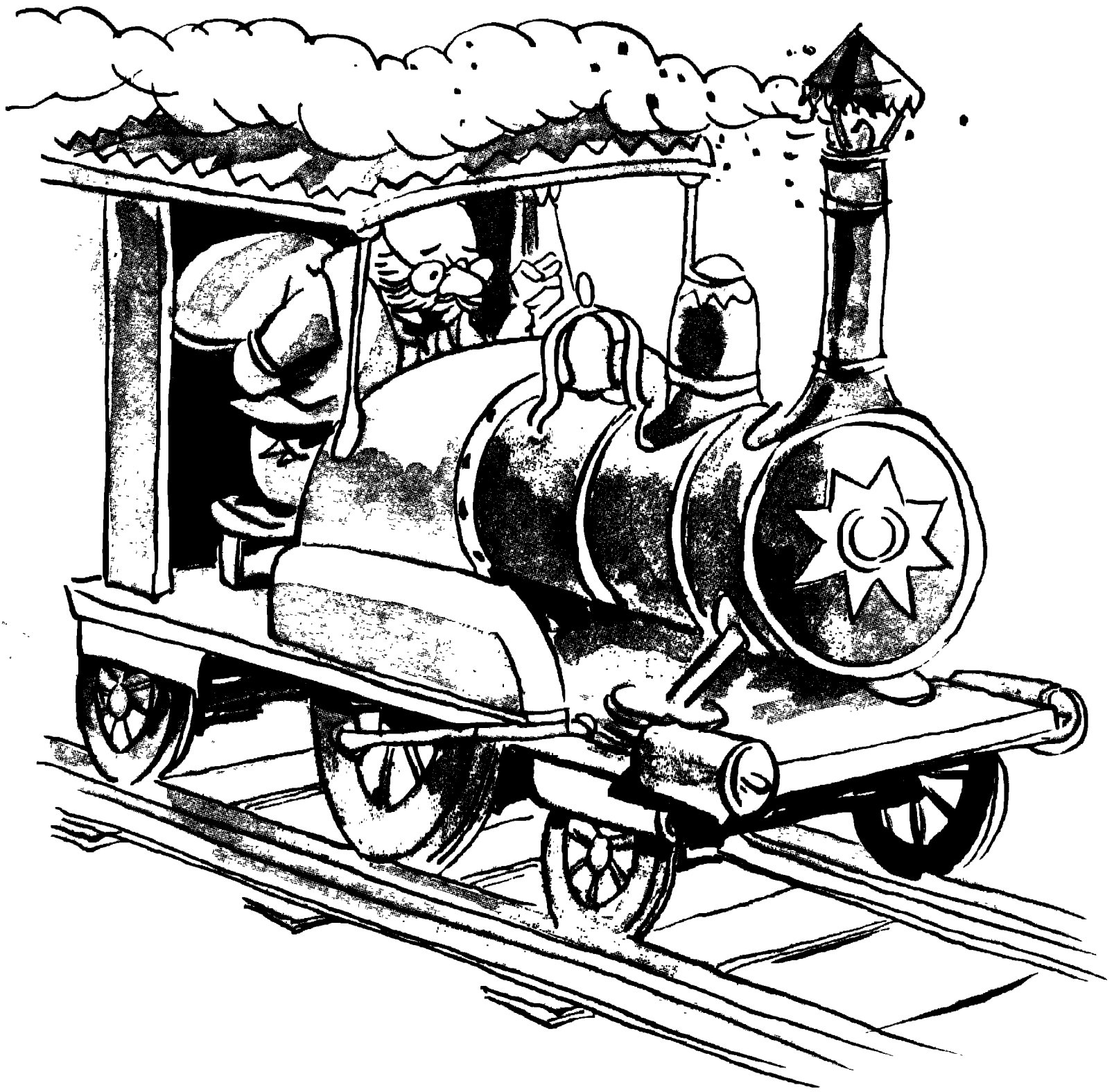
पहले आदमी के पास केवल शरीर की ताकत थी। फिर उसने जानवरों से काम लिया। इससे काम जल्दी होने लगा। समय भी कम लगता था। मगर मानव और ताकत चाहता था।

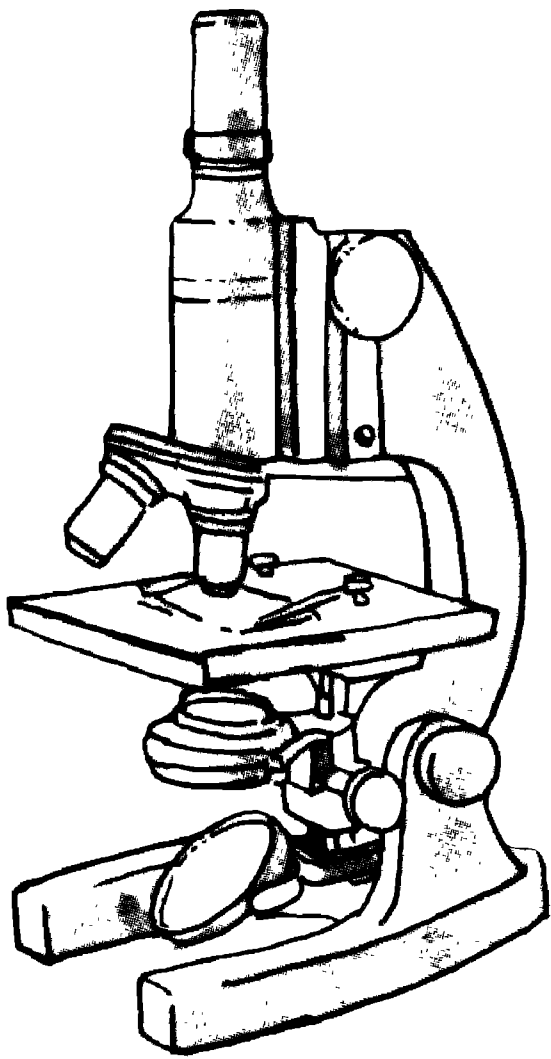
अब उसने हवा से काम लिया। पाल की मदद से पानी पर नाव चलायी। हवा-चक्की से मशीन चलायी। मगर हवा पर सदा भरोसा नहीं किया जा सकता था। कभी हवा बहुत धीरे बहती। तब नाव रुक जाती। चक्की भी बंद हो जाती थी।

इसके बाद बहते पानी से काम लिया गया। जहां देखा नदी की धारा तेज है, वहीं पानी की चक्की लगा दी। मगर इसमें भी कठिनाई थी। पानी की धारा हर जगह तो होती नहीं। फिर नदी में पानी भी एक-सा नहीं रहता। कभी नदी सूख जाती। इससे चक्की बेकार हो जाती। कभी बाढ़ में चक्की बह जाती।

अब आदमी सोच में पड़ गया। उसे ताकत की जरूरत तो थी। मगर ऐसी जो हमेशा एक-सी रहे। तभी उसे कोयला मिल गया। इसे जलाने से गर्मी पैदा हुई। गर्मी से जो ताकत मिलती है उसे ऊर्जा कहते हैं। इससे पानी भाप बन गया। मानव खुश हो गया। अरे! भाप में तो बहुत ताकत है। यह तो पानी

गर्म करने का बर्तन ही तोड़ दे। सोचा, क्यों न इस ताकत से काम लूं? भाप का पहला इंजन पौने दो सौ साल पहले बना था। इसे दो विदेशियों ने बनाया था। बना तो लिया, पर इसे चलायें किस पर? इसे चलाने के लिए लोहे की चादरें बिछायी गयीं। एक कोयला खान में यह इंजन चला। पर इंजन बहुत भारी था। कई चादरें टूट गयीं।

बाद में एक इंजीनियर ने कुछ सुधार किया। रेल की दो पटरियां बिछायी गयीं। उस पर इंजन को चलाया। इस तरह यह खानों से कोयला ढोने लगा। यह सवारी और मालगाड़ी भी खींचने लगा। इससे यातायात बढ़ गया। हर जगह रेलगाड़ी चलने लगी। इस कारण नये-नये कारखाने खुल गये। इनमें भाप से मशीनें चलने लगीं। अब हवा-पानी के भरोसे नहीं रहना पड़ता था। जहां इंजन चलाना हो, कोयला ले जाकर भाप बना ली। भाप के इंजन से पानी में जहाज चलने लगा।

धीरे-धीरे और बदलाव आया। अब नया इंजन आया। इसमें डीजल या पेट्रोल जलता था। इससे ऊर्जा पैदा होती थी। अब इंजन बिजली से भी चलते हैं।

पहले एक जगह जाने में कई दिन लगते थे। अब वहां कुछ घंटों में पहुंच सकते हैं। सफर आरामदायक हो गया है। देश के एक कोने से दूसरे कोने तक सामान जा सकता है। सामान सुरक्षित भी रहता है। समय की भी बचत होती है। हवाई जहाज और मोटर से थोड़े ही समय में कहीं भी पहुंच सकते हैं।

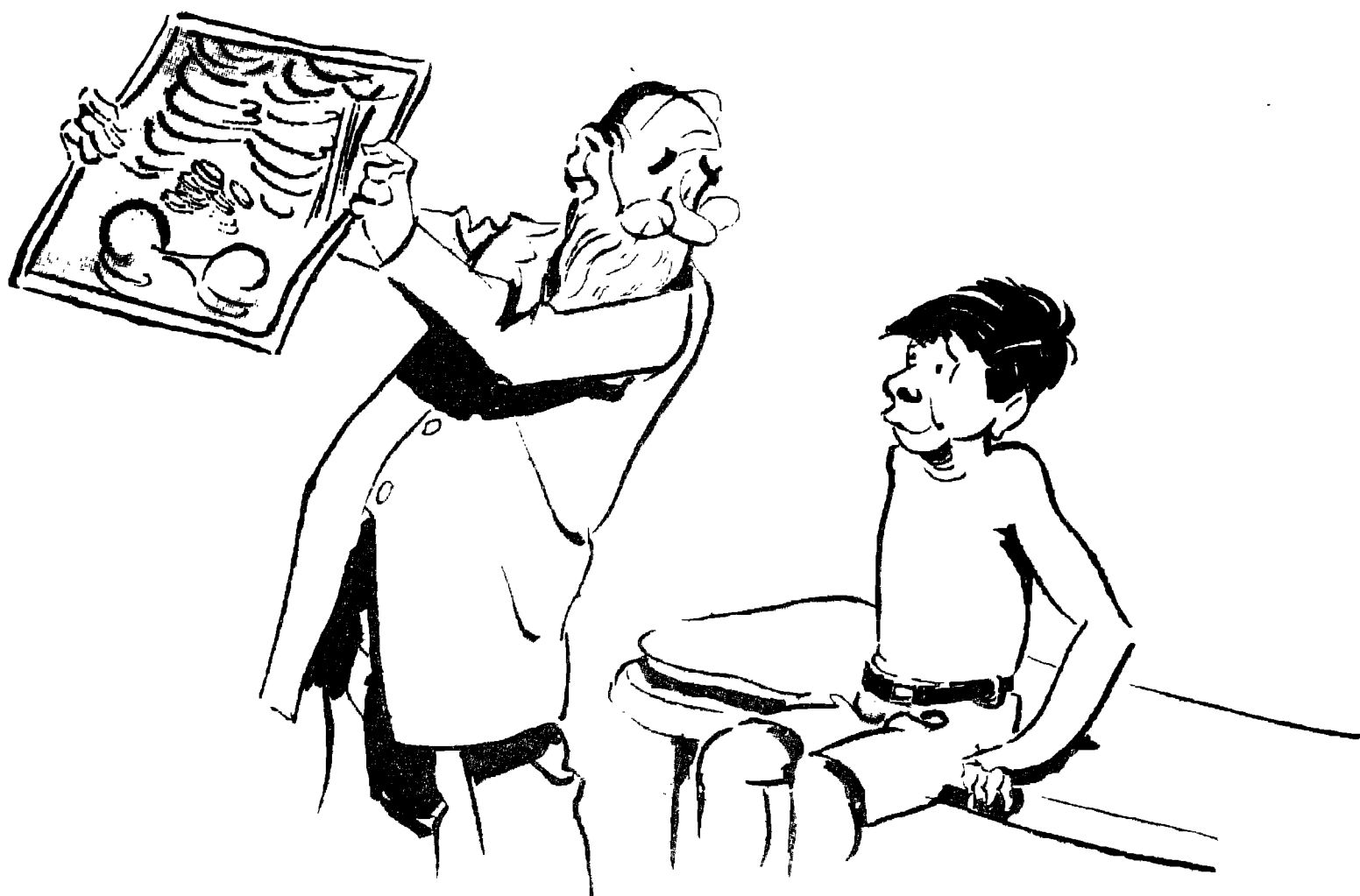
अब खेतों में ट्रेक्टर चलने लगे हैं। खेती के सब काम मशीनों से होने लगे हैं। इन खोजों से दूरियां पट गयी हैं। मानव ने हवा, पानी को जीत लिया है।

खुर्दबीन

आदमी की आँख बड़े काम की है। मगर आँख से हर चीज नहीं देखी जा सकती। आँख बहुत बारीक चीज नहीं देख पाती। बहुत बारीक चीज देखने के लिए बड़ा करके दिखाने वाले शीशे की मदद लेनी पड़ती है। इसे लैंस कहते हैं। या फिर खुर्दबीन की मदद लेनी पड़ेगी। खुर्दबीन से छोटी चीज़ बड़ी दिखाई देती है।

छह सौ साल पहले ये शीशे केवल चश्मों में लगते थे। तब खुर्दबीन का पता किसी को नहीं था। दो सौ साल पहले इसकी खोज हुई। गेलिलियो नाम के आदमी ने इसकी खोज की। वह अपनी दूरबीन में कुछ कर रहा था। दूरबीन से दूर की चीज पास दिखती है। अचानक उसने देखा। दूर की चीज तो पास नहीं दिख रही है। इसकी जगह पास की चीज ही बड़ी दिखने लगी है। इस तरह खुर्दबीन की खोज हुई।

विदेश में एक दुकानदार था। वह बड़ा दिखाने वाले शीशे (लैंस) घिसने का काम करता था। उसके शीशे बहुत अच्छे थे। उनमें से कोई भी चीज दो सौ गुना बड़ी दिखाई देती थी। उसने पानी की एक बूंद में सैकड़ों जीव देखे। ये विचित्र ढंग से तैरते और एक दूसरे को धक्का मारते रहते। इनको वह "सूक्ष्म पशु" कहता था। इन्हीं को बाद में बेक्टेरिया या जीवाणु कहा गया। वह कोई वैज्ञानिक तो था नहीं। इसलिए वह कुछ समझ नहीं पाया। उसने कुछ वैज्ञानिकों को उनके बारे में लिखा। मगर सबने उसकी हंसी उड़ायी।

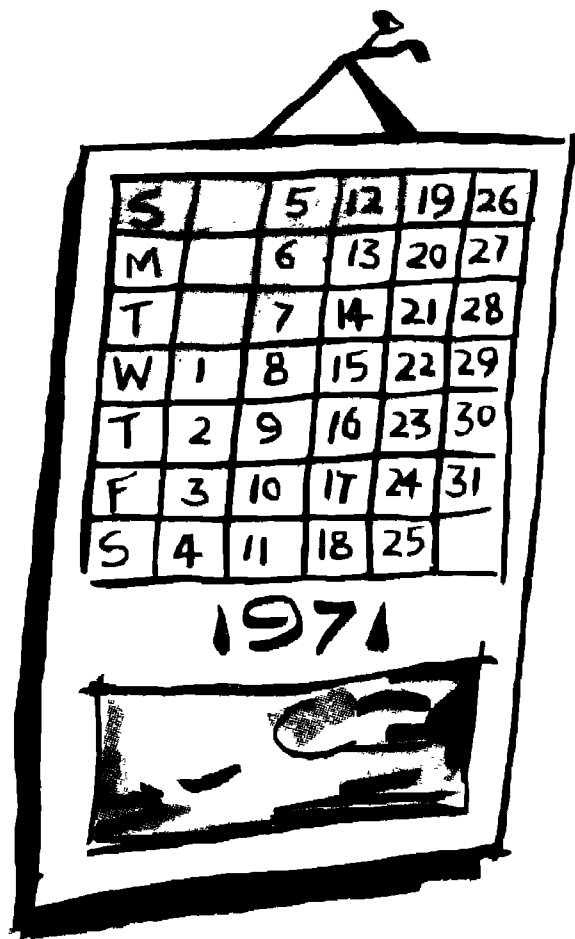
एक शीशे (लैंस) से आकार दस गुना बड़ा हो जाता है। अधिक बड़ा देखना हो तो खुर्दबीन चाहिए। इन शीशों के बाद कई तरह के खुर्दबीन बने। इसमें दो शीशे लगे होते हैं। एक शीशा उस चीज की तरफ होता है। दूसरा आँख के पास होता है। इन दोनों के कारण चीज बड़ी दिखती है।

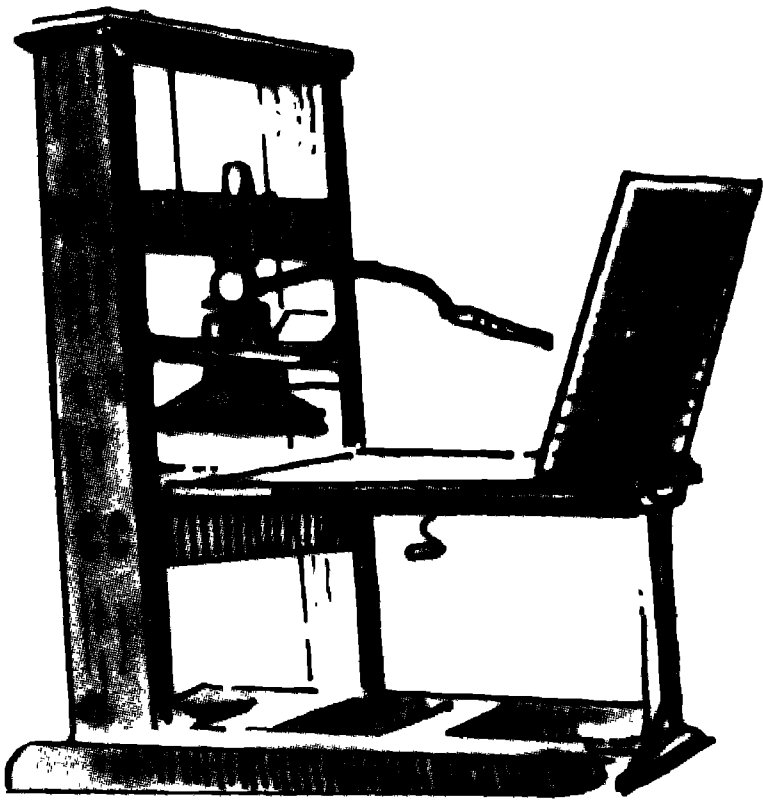
पहले इस यंत्र में चीज धुंधली दिखती थी। फिर उसमें कुछ सुधार हुआ। अनेक सालों के बाद जो यंत्र बना उसमें हर चीज साफ दिखाई देती थी। इसका

और गुण भी है। इसमें एक ताकत होती है। इसके कारण हम उस चीज की हर बारीकी को अलग-अलग देख सकते हैं।

रोग के कई किटाणु और बेक्टेरिया बहुत छोटे होते हैं। इनमें से कुछ तो खुर्दबीन से भी नहीं दीखते। इनके लिए खास तरह के यंत्र बने। उनसे ये भी दिखने लगे।

एक्स-रे फोटो के बारे में सब जानते हैं। एक तरह की खास किरणों को एक्स-रे कहते हैं। अस्पतालों में इन खास किरणों से शरीर के भीतर के फोटो खींचे जाते हैं। ये किरणें शरीर में से गुजर सकती हैं। इस बात की कोशिश हुई थी कि इन किरणों को काम में लेकर, एक खुर्दबीन बनाया जाये। मगर ऐसा नहीं हो सका।

अलग-अलग काम के लिए अलग-अलग यंत्र हैं। इससे सबकी जरूरत पूरी हो जाती है। इस यंत्र से बीमारी पैदा करने वाले कीटाणुओं का पता चला।

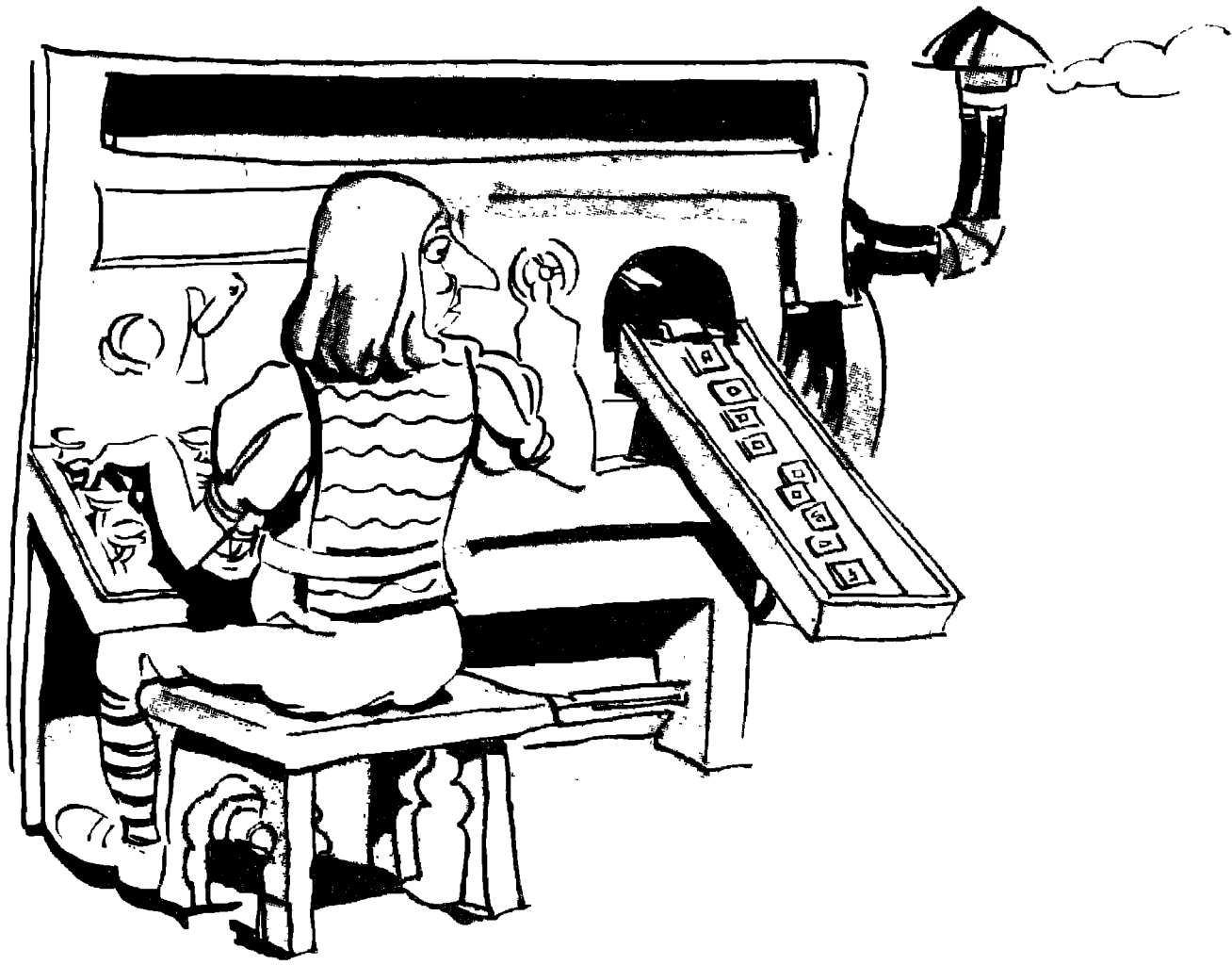
फिर एक और नये किस्म का यंत्र बनाया गया। इसमें लैंस के बजाय चुंबक

लगाया गया। साधारण यंत्र में जो चीज दिखती है उससे दो सौ गुना छोटी चीज इस नये यंत्र में दीख जाती है। यह आकार को तीन लाख गुना बड़ा करके दिखाता है। यानी एक मक्खी इसमें दो किलीमीटर लंबी दिखेगी।

इन यंत्रों ने डाक्टरों की बड़ी मदद की है। रोग पैदा करने वाले बहुत से कीटाणु ऐसे थे, जिनका पता नहीं था। वे भी इसमें नजर आये हैं। कैंसर रोग पर काबू पाने में यह मददगार बन रहा है। इसकी मदद से कई बीमारियों पर काबू पा लिया गया है। इससे मनुष्य की आयु बढ़ी है। इस तरह यह यंत्र हमारे बड़े काम का है।

छपाई

चित्र बनाकर उसमें रंग भरना मजेदार काम है। आदमी ने तीस हजार साल पहले यह सीख लिया था।

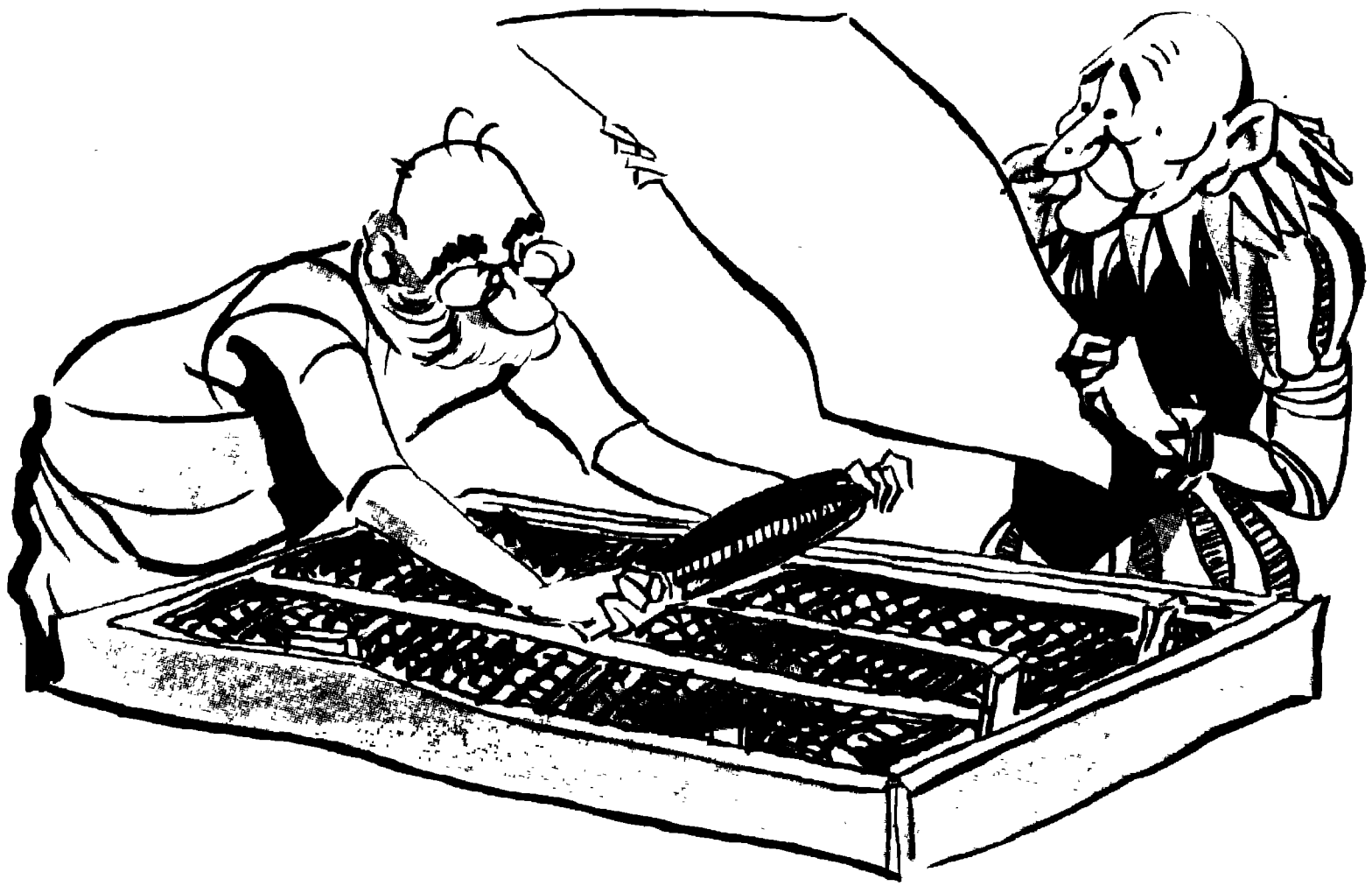
धीरे-धीरे आदमी प्रगति करता गया। अब वह अपने मन की बात सबको बताना चाहता था। इसके लिए उसने चित्रों का सहारा लिया। इस तरह लेखन की खोज हुई। इसलिए शुरू के अक्षर चित्रों जैसे होते थे।

लिखाई से मानव के काम में बदलाव आया। ज्ञानी लोग अपने विचार लिखने लगे। इस तरह उनका काम उनके मरने पर मिट नहीं जाता था। लिखा हुआ सुरक्षित रहता था। इसे आने वाली पीढ़ी के लोग पढ़ते थे। इससे उनका ज्ञान बढ़ता था। इस तरह किताबें ज्ञान का खजाना बन गयीं।

मगर हाथ से किताबें नकल करने में देर लगती थी। इससे कुछ किताबें ही बन पातीं। ये महंगी होती थीं। पढ़ने वालों को परेशानी होती। किताब के लिए उन्हें दूर तक जाना पड़ता था। इससे बहुत कम लोग किताबें पढ़ पाते थे। नकल के कारण धोखा-धड़ी भी होने लगी।

मगर अब समय बदल रहा था । लोग हर बात का कारण जानना चाहते थे । बिना कारण लोग बात मानने को तैयार नहीं थे ।

विज्ञान का जमाना आया । हर चीज को नापा-तोला जाने लगा । ज्ञान का दरवाजा हर किसी के लिए खुल गया । हर नयी खोज की जानकारी सबको देनी थी । इसके लिए अधिक किताबों की जरूरत थी ।

इसी समय छपाई की खोज हुई । हजारों किताबें छापी गयीं । लोगों में इससे नये विचार जागने लगे । ज्ञान दूर-दूर तक फैलने लगा । छपाई की खोज साढ़े पांच सौ साल पहले विदेश में हुई ।

पहले छपाई इस तरह होती थी । अलग-अलग अक्षर पहले ढाल दिये । इन को जोड़कर शब्द बनाये । शब्दों को सजाकर फिर वाक्य बना लेते थे । इन

अक्षरों को इधर-उधर हटा भी सकते थे। इस तरह से छपी पहली किताब "बाइबिल" थी।

शुरू में अक्षरों को सांचे में सजा देते थे। फिर उस पर एक रोलर से स्याही फेर देते। स्याही लगे अक्षरों पर कागज दबा देते। इस तरह छपाई हो जाती थी।

धीरे-धीरे इसमें भी सुधार हुआ। हाथ का छापाखाना पुराना हो गया। उसकी जगह मशीन से काम होने लगा। इसमें सिलाई मशीन के समान पैडल था। सांचे के नीचे कागज रख देते। एक रोलर से स्याही फिर जाती और पैडल ऊपर नीचे करते ही सांचा नीचे हो जाता। इस तरह कागज छप जाता। मगर इसमें भी कागज हाथ से रखना, उठाना पड़ता था।

इस मशीन में भी सुधार किया गया। करीब एक सौ अस्सी साल पहले छपाई में भाप का प्रयोग हुआ। इससे मशीनें बड़ी बनने लगीं। कम समय में अधिक कागज छपने लगा। मगर अब भी कमी थी। एक अपने आप चलने

वाली मशीन की जरूरत थी । ऐसी मशीन, जो खुद ही स्याही फैला ले । कागज उठाकर मशीन में सही जगह रख दे । छप जाने पर उसे फिर से उठा ले ।

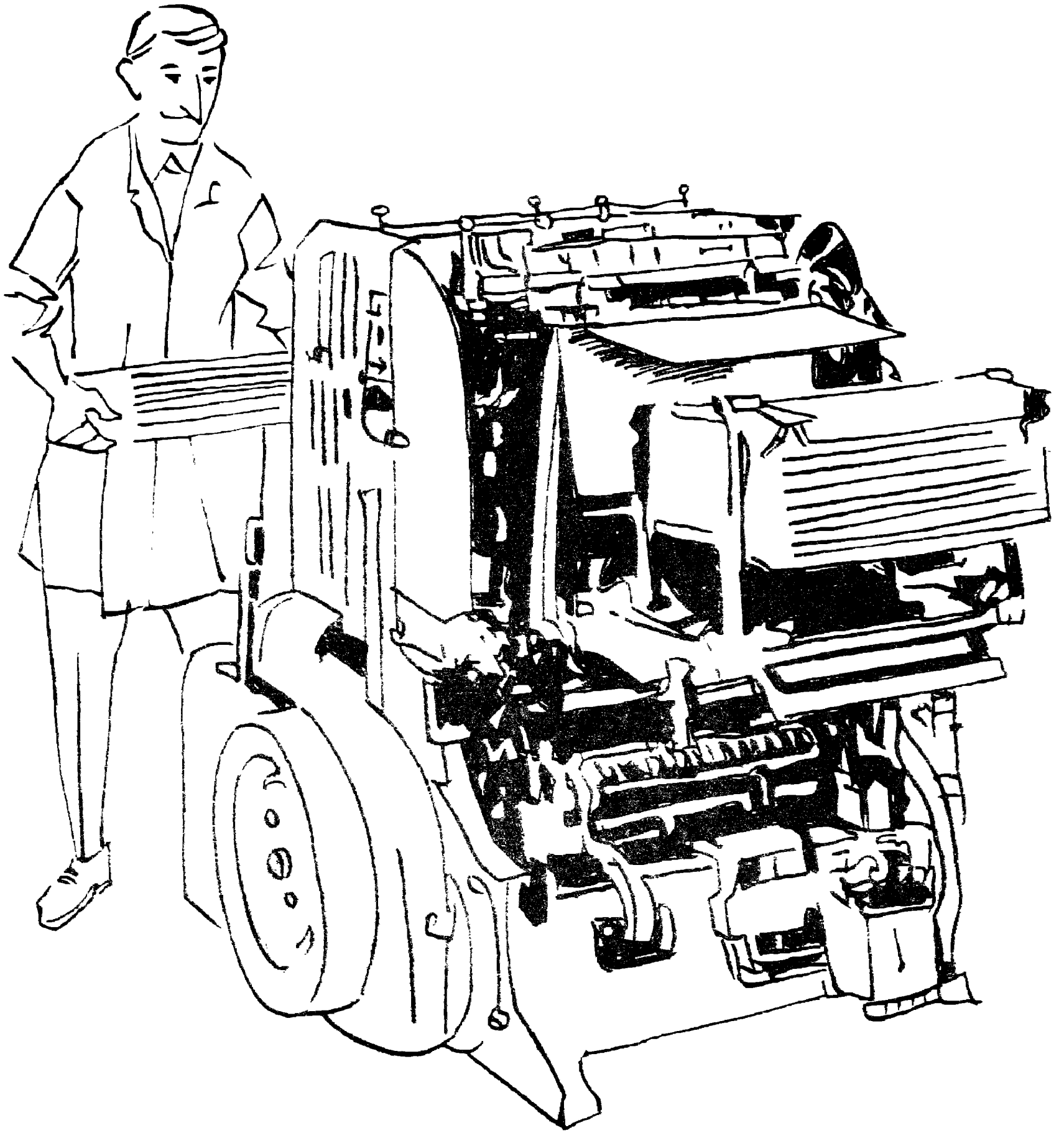
आज की छपाई मशीन में ये सब बातें हैं । इसमें सब काम अपने आप होता है । यह अपने आप स्याही लगा लेती है । हवा खींचने वाली कटोरियों की मदद से कागज उठा लेती है । छपाई वाली जगह में इसे रखती है । छप जाने पर उठा कर एक तरफ रख भी देती है ।

अखबारों की छपाई बहुत बड़ी मशीन से होती है । नयी मशीन बहुत तेजी से छपाई करती है । एक घंटे में एक किताब के करीब तीस हजार पन्ने छप जाते हैं ।

छपाई में और भी कई काम जोड़े गये । किताबों और अखबारों में चित्र होते हैं। ये चित्र दो तरह से छापे जाते हैं। काले-सफेद और रंगीन। ये दोनों अलग-अलग तरह से छापे जाते हैं ।

अब विज्ञान और आगे बढ़ गया है । अब तो अक्षरों को फोटो खींच कर जमाया जाता है । इससे छपाई बहुत बढ़िया होती है । इसमें खर्चा भी बहुत कम बैठता है । टाइप करने की मशीन की खोज भी इसी समय हुई । इससे एक पन्ने की करीब छह नकलें एक साथ मिल जाती हैं ।

छपाई ने ज्ञान के दरवाजे खोल दिये हैं । संसार में नयी खोजें होती ही रहती हैं । किताबों, अखबारों से उनका पता चल जाता है । यह सब छपाई के कारण हुआ है ।

मुद्रक : जूपीटर ऑफसेट वर्क्स, शाहदरा, दिल्ली-110 032

2. **Interview Schedule:**

Three interview schedules were designed for the beneficieries, namely, i. Learners, ii. Parents, and iii. Employers. These were essentially used as a checklist and guide while conducting the interview. These were devised to uncover the following aspects:

i. Motivation to join NFE or sending the ward to the NFE centre.

ii. Services rendered by the NFE centres.

iii. The changes perceived in the learners through NFE in terms of their personal, social, vocational and family life.

iv. The extent and popularity of NFE in terms of its practical utility.

3. **Rating Chart:**

One check list for observation of the NFE centres was devised to assist the investigators and project co-ordinators to evaluate the physical aspect of the centres and checking records, assess student-teacher rapport the learning needs and problems etc.

Tests:

Besides the tools, tests were administered at the quality of learner output in terms of academic achievements as follows:

academic achievements as follows:

a.	Primary I :	Hindi, Maths, Environmental Studies	3
b.	Primary II :	Hindi, Maths, Science and Social Science	4
c.	Middle:	Hindi, English, Sanskirt, Maths, Science, Social Science	6
			13

Procedure of Data collection and Administration of Tools and Tests

Step One:

The orientation programme acquainted the investigtors with the procedures of data collection, and tabulation. This included the techniques of interview, administration of tests, and the modes of observation, as well as the procedure of recording raw scores on the tabulation sheets.

Step Two:

Each investigator was then given ten primary and two middle, if any, centres of each selected block for data collection in state. They were expected to stay for twnety four hours in each village where the centre was

located, interviewing the sample population in the morning and administering tests and observing the centre in the evening.

Tabulation:

Tabulation was done to aggregate the sample population and their achievements on the basis of the variables mentioned earlier for an indepth study of each category.

Voluntary Agencies and the formal schools:

Each investigator was also assigned with one formal school and the clientele of one voluntary agency (if any in that area) for the administration of achievement tests for inter-group comparision of the student output.

Step Three:

Tabulation of the raw scores was completed at the investigators level. The entire data of all the four blocks was cumulatively handled by the Project Coordinator of each state for analysis.

Step Four:

An inter-state comprisan was worked out at the central level on the basis of the state reports and data provided by the Project Co-ordinators of the nine states.

This report is the outcome of this step.

CHAPTER - II

RATIONAL EVALUATION

A study of all the relevant material and documents revealed four types of curricula being used in the nine states under study. Seven out of nine states have separate curriculum for NFE, while two viz. J&K and Orissa were using the curriculum prescribed for the formal schools in their NFE centres also. Out of the first seven, four states, viz. Assam, Bihar, Madhya Pradesh and Uttar Pradesh have condensed version of formal curriculum. Rajasthan has integrated curriculum, while Andhra Pradesh and West Bengal have partly integrated. Integration has been operationally defined in two ways:

> Integration among subjects and integration of content with life. Thus, the operational definition that was provided to states was:
>
> "(a) the integration of subjects, where themes/concepts from social science, natural science, language and Mathematics have been taken together and a comprehensive treatment is given to all in the same lesson or topic to bring about social awareness in the learners through literacy and numeracy."
>
> "(b) the integration of the content with life with regard to needs and problems, life experiences and life styles of the target clientele."

There are, theoretically speaking, a variety of models which could be in use in NFE programmes.

1.	Formal Curriculum	: The same as in formal schools.
2.	Condensed Curriculum	: Formal school curriculum which has been pruned keeping in view the time available for its transaction.
3.	Integrated Curriculum	: As defined above.
4.	Partly integrated Curriculum	: Where one or two subjects have been combined and the remaining subjects are taught as in the formal schoolss.
5.	Need and Problem based curriculum	: The curriculum has been devised de-novo keeping in view the problems faced by and needs of the particular community for which the programme is intended. Hence, it may take into account various learning outcomes of the formal system as reflected through the needs and problemsof the clientele.

It will be noticed that none of these states have need and problem based curriculum for the NFE programme.

(a) Formal Curriculum Model:

The two states i.e. J&K and Orissa, have adopted this model to run their NFE centres for 2 hours a day for 3 years and 3 hours a day for one and a half years respectively. They were transacting the formal school curriculum without any modification.

For the present study the curricular objectives were classified as: academic objectives, SUPW related objectives, social and national objectives and health and hygiene objectives. On analysis it has been found that J&K curriculum being followed in NFE has all the four aspects although SUPW objectives are not separately stated, while in Orissa there is a statement of general objectives which covers these areas. Orissa has, however, developed 12 learning outcomes for SUPW out of which 3 are specifically meant to develop skills. There is no objective which leads to development of attitudes.

In Orissa 32 learning outcomes are related to social and national aspects - 12 deal with family, 10 with society and 10 with nation; J&K has 17 learning outcomes in this category out of which 7 relate to family, 6 to society and 4 to nation.

In the area of Health and Hygiene, J&K has 22 learning outcomes out of which 10 relate to knowledge ; 8 to skills and 4 to attitudes, while Orissa has 18 of which 8 are related to knowledge, 6 to skills and 4 to attitude.

A need for clear cut identification of specific learning outcomes in line with the needs and expectations of the NFE children was felt in J&K. In Orissa, the need for learning outcomes for social sciences was felt. Also in Mathematics the learning outcomes need to be categorised in terms of leading to knowledge, skills and attitudes. It was also felt in both the states that style of presenting the learning outcomes should be modified and given in terms of skills and behavioural outcomes.

The subject-wise number of themes and topics at the primary level give the following picture:

Subjects	J&K		Orissa	
	No. of themes	No.of topics	No.of themes	No. of topic
Language	34	08	81	132
Natural Science	6	11	22	339
Social Science	5	15	25	162
Mathematics	13	50	34	96

This table is self-explanatory and depicts relative position of the two states following formal school curriculum. The number of text books being taught in NFE centres in J&K and Orissa respectively are: Language 5 and 8, Mathematics 5 and 5, Natural Science and Social Science 3 and 5. No supplementary reader has been prepared in either of the two states.

The instructional methods being used in NFE centres in both the states are drill, question-answer, learning by doing, story telling, dramatisation, observation and play way method. None of the two states have mentioned environmental exploration.

The pupil evaluation has not found a place in the curriculum in Orissa, while in J&K, only knowledge and skill are evaluated under the academic, social and national and health

and hygiene objectives. No evaluation of attitude is done. Orissa, by virtue of practice in the formal schools, follows the same freouency of pupil evaluation varying from "during the lesson" to the "end of unit tests", quarterly, half yearly and yearly examinations while in J&K the curriculum makes a mention of half yearly tests and yearly examination.

The instructional materials form an important component of any educational programme and can be in the form of textbooks, work books, supplementary readers, modules, capsules, teachers guides, training manuals evaluation materials etc . Since the two states are following the formal school curriculum none of these have developed any specific material of any kind for use in NFE centres under the centrally sponsored scheme. Only the available formal school materials are being used in the NFE centres in both these states. However, it needs to be mentioned here that in J&K, State Institute of Education, Srinagar has made some attempt to develop some instructional materials (Nai Roshni, Khushal Gharana etc.). Similarly, the SCERT, Orissa has developed NFE curriculum, training,—manual, teachers guide and teachers handbook for NFE programme which were not being used in NFE centres under centrally sponssored schemes.

The analysis of the instructional materials in the two states reveals that language books in J&K, partly cover the culture, value system, behavioural patterns and

development of attitude towards the family, the society and the nation. There are some uncovered aspects such as culture, national integration and behaviour towards peer group and elders. The urban, rural and tribal settings have found place but the hilly, coastal and desert area get low priority though sometimes they have also been presented. The conceptual approach is totally missing in these language books. While in case of Orissa, the sociological objectives have been covered to a great extent in the language books and the conceptual approach has been adopted. Social environment, particularly of the tribal communities have been adequately covered in language books. The physical environment of coastal, desert, rural and urban areas have also found place in these books. The illustrations are close to environment and the social and personal needs have been reflected in the content. However, the illustrations need to be greater in number to enhance the value of the book.

In the case of books of natural sciences in J&K, it is observed that the conceptual approach is followed in the books meant for class III onwards but not in books of lower standards. However, the communicability of these books was found to be poor and the needs and problems of life such as health and hygiene lacking. Illustrations also need to be more than what are given, although they reflect the socio-cultural background of the learners. In Orissa the conceptual approach has been adopted; the

environment of rural and urban life has been reflected in the content. Here too, the communicability of these books was found to be poor as the vocabulary used is not commensurate with the learners' known vocabulary list. The personal and social needs have not been adequately covered though the illustrations are close to learners' life but are inadequate in number.

In Social Sciences, only cultural aspects have found part coverage in J&K books. The aspects that need to be included are the attitude towards peer groups, family, national and emotional integration. The communicability of these books is, again, an area that needs improvement in view of the known sentence pattern and vocabulary of the learners. The illustrations need improvement in terms of their numbers.

The Mathematics books in J&K cover only partly the socio-cultural values and they need more attention. The exercises given at the end of topics cover the contents of the topic. Conceptual approach has been adopted. However, the communicability of the book is average and needs a little improvement. Almost similar is the case with Orissa in respect of Mathematics text books.

Methods of Teaching

The methods of teaching suggested and practised are conventional. The methods are indicated in the curriculum or textbooks are given below:

Subjects	Methods	
	JK	Orissa
Language	Lecture, Question-answer Drill Method	Drill, Story-telling, question-answer, dialogue, obser vation, dramatisation.
Mathematics	Lecture, Question-answer, Drill, Demonstration and observation.	Story-telling, question-answer, and drill.
Social Science	Lecture, question-answer, Demonstration and observation.	Story-telling, question-answer, Dramatisation, discussion and self-learning.
Natural Science	Lecture, Question-answer, demonstration, and observation.	Story-telling, Question-answer, demonstration, and learning by doing.

It will be noticed that while there is scope for amplification of methods in teaching in J&K as compared to Orissa, there is a conspicuous absence of use of A-V aids specially when the curriculum and materials are those that are meant for formal system.

Training Programme:

In J&K, there is no teachers guide, training manual for Instructors or Supervisors. No training has been organised for either of these category of NFE workers. Same is the case with Orissa, although with some difference. There is a syllabus issued by Board of Secondary Education, Orissa which mentions the type of training about NFE that the pupil teachers should get in their training schools. But then, the NFE instructor is not a person trained in the training schools. Somehow, there is much scope for improvement in this area in both the States and efforts in this direction is urgently needed. There should be both inservice and pre-service training for NFE personnel (teaachers and supervisors) and the content should be enriched by sufficient practical work. The training of longer duration is needed to make teaching learning pleasant and effective, as mentioned in its education code. One needs to remind oneself that the curriculum and instructional materials are the same as that of formal schools and as such all that is there for formal school gets reflected for NFE centres too.

In Orissa, mention of purposes of evaluation have been enumerated as certification, helping the child to learn and

for multipoint entry whereas in J&K it is only certification.

In J&K there is no internal assessment in NFE centres as contrasted with formal system in the same state, whereas in Orissa this is done even in NFE centres. At the end of the course (Primary) the NFE learners take the formal school examination and certificates are provided to those who succeed. No certificates to drop out from NFE system is issued with regard to his attendance.

Suggestions:

The first and foremost suggestion in both these States is that the purposes of NFE /and clientele being different in nature, there should be a concerted effort for the development of curricular and instructional materials in both the States. In the case of Orissa, perhaps, the need is to effect an intensive coordination between SCERT's efforts and centrally sponsored scheme. The materials developed and tried out by SCERT should find place in the scheme of things there. The reasons for this absence of coordination between two wings of the same Department in the State is not a point of enquiry here but it is true that the improvement in this regard will solve many problems of NFE with which the State of Orissa is saddled with.

In J&K, while there is a need to develop a curriculum for NFE which may have its parlence with formal system, it may be advisable to have an integrated approach. Similarly, the instructional materials may also follow the same approach so as to be meaningful and practicable in the available time. A concerted effort is needed by the State agencies in this direction. They could adapt or adopt the

materials prepared on similar lines by other agencies.

Training of the NFE workers is another area that needs special attention in both the states. It is well known that the training of formal school's teacher will not be of much help as the entire approach is different. Rather, a retraining of those trained in formal methods is required. Pupil evaluation has to be continuous, diagnostic and remedial. Also aspects other than academic need to be evaluated e.g. behaviour with peers, family, community, employer etc. For this necessary tools may be developed and entry into pupil record card needs to be made. An NFE learner is not only a pupil but an earning member of the society and should be so acknowledged. Certification should be not only in the academic field but also for his achievement in other behavioural areas. This should not be only at the terminal stage.

(b) Condensed Curriculum Model:

A consistent effort in retaining a parity between the formal and non-formal in the academic domain is reflected in the delineation of the NFE curricula in several states, namely, Assam, Bihar, Madhya Pradesh and Uttar Pradesh, where essential learning outcomes of formal school and core curriculum are dished out to the NFE clientele in an abridged form, popularly known as Condensed Course NFE Curriculum. The NFE programme in these four states strikes a curious resemblance as they adapt and adopt the formal school curriculum to suit

the academic needs of the NFE clientele. The salient sectors of adoption are:-

i. Retention of the same subjects taught in core curriculum of the formal schools.

ii. Retention of the same objectives specified as expected learning outcomes in formal schools.

iii. Retention of the same dimensions of objectives in terms of knowledge, skill and attitude in each subject as in formal schools.

iv. The spread of themes of concepts over lessons, in terms of their graded difficulty level as well as the serial order in respect of thematic and lesson arrangement, seem to follow the formal line.

Condensation, therefore, takes place more in selection, adaptation and synchronisation of the themes contained in the formal school textbooks, leading subsequently to the retention of only the core concepts of the discipline. The number of lessons allotted to each theme is consequently lesser. This leads to lesser number of books in each subject. In some cases, as in U.P., only two volumes are produced to cover the subject in a sequential pattern, but not with integrated content, and no separate book is prescribed for each subject.

However, none of these four states have indicated in their curritulum any different approach in methods of teaching or modes of evaluation.

The duration of the NFE programme is two years at the Primary level equivalent to classes I to V of the formal system. In Assam, it is broken into four semesters while in other three states it is on the annual pattern. Madhya Pradeshoffers

730 teaching hours in one year, followed by U.P. with 600 hours, Assam 500 hours and Bihar 180 hours which includes co-curricular activities too. In U.P. about 380 hours out of 730 is devoted to curricular activities, and Assam spends 200 hours out of 500 hours. There is no clearcut indication of such a distribution in case of Bihar and Madhya Pradesh.

In Madhya Pradesh, one out of four languages viz. Hindi, Marathi, Urdu and English are offered to learners at NFE centres as optional language whereas in other three States only one language, that is the regional language is offered. Mathematics is taught in all these four states as a compulsory subject. The sciences - both natural and social - are taught in the latter half of the two year programme in Bihar, Madhya Pradesh and Uttar Pradesh, while in Assam there is only a mention of it in the curriculum without any books prescribed for teaching them.

Objectives of the Curriculum:

The NFE curriculum in the four states covers in its objectives the three major dimensions viz., knowledge, skills and attitudes.

The curriculum in each of the states mentions the number of books and supplementary readers along with total number of themes and lessons to be incorporated in the textbooks in each subject for the entire duration. Madhya Pradesh has five textbooks and three supplementary readers in each of the three languages, namely, Hindi, Marathi and Urdu while English has five textbooks and no supplementary reader. In Bihar there

are only two Hindi language textbooks with no workbooks or readers. In Assam also only two textbooks of Assamese are prescribed. In Uttar Pradesh, there are essentially two books with a section of each book given to language.

In Mathematics, Madhya Pradesh has five textbooks, Uttar Pradesh has combined in its two volumes of Gyan Deep Part I and Part II. Bihar has two books. In Assam no mention of Mathematics book is made although the objectives of teaching mathematics are quite pronounced in the NFE curriculum.

The social and natural science form two separate subjects in the NFE curriculum in this condensed model. Madhya Pradesh curriculum recommends three textbooks each for social and natural science. In Bihar there is only one book having two halves, one each for the two sciences. In Assam, although there is a mention of these two sciences as subjectwise disciplines but books are simply not there. In Uttar Pradesh only the second book includes both social and natural science along with Matehmatics and Hindi.

Thus, abridgement in content and lesser number of books are the charactertistics of the condensed model except in case of Madhya Pradeh where there are as many as 16 textbooks and three supplementary readers for the Primary stage of NFE. Evidently, the attempt is to establish parity between formal and non-formal systems on class to class basis. It may be pointed out that the difference between the formal model and condensed model of Madhya Pradesh is only in respect of the condensed syllabus for NFE.

The table given below gives us an idea of textbooks, themes, topics and supplementary readers in these states.

TABLE: Showing Instructional Materials, themes and topics

	Natural Science			Social Science			Maths			Language			
State	A	B	C	A	B	C	A	B	C	A	B	C	D
Assam	-	-	-	-	-	-	-	30	42	2	20	45	-
Bihar	1	5	5	1	5	5	2	10	36	3	18	69	-
M.P.	3	18	63	3	18	95	5	18	98	5*	18	62	3**
U.P.	1	4	8	1	5	9	2	12	24	2	8	38	-

A - No. of Textbooks

B - Themes

C - Topics

D - Supplementary Readers

Note: * 5 each in English, Hindi, Marathi, Urdu to be offered one out of these.

** No Supplementary Reader for English

There is wide variation in themes and topics that is considered as essential in different states having this model. Health and hygiene has been integrated with other disciplines. Also there is no mention of Teachers Guide or Training Manuals to help the teachers.

Teaching Methods:

In the organisation aspects of teaching methods Uttar Pradesh and Assam have emphasised excursion and demonstration; extra-curricular activities and celebrations have been mentioned in Assam, while survey and personal contacts in Bihar are significant. In the instructional aspects, U.P. lays more emphasis on activity method including picture reading and dramatisation. Question answer also finds a place in U.P. curriculum. Bihar lays stress on discussion, question-answer, demonstration using aids, activity including play way techniques, dramatisation and story telling. Assam highlights observation, discussion, lecture and question-answer methods. M.P. touches on all the above methods without emphasising any specific method.

Evaluation:

Evaluation is the most neglected part in the curriculum of all the four states under reference. While U.P. and Bihar make a sketchy mention of it in their curricula,

M.P. and Assam are totally silent over it. Except M.P., the the remaining three states make mention of internal assessment and teacher made tests for formative evaluation. While U.P. envisages unit tests, Bihar proposes quarterly tests. There is no information of tools and techniques anywhere.

The Terminal External Examinations is held only in M.P., which is the general examination at the end of the course held by District Examination Committee and is common to both NFE and formal schools. Evaluation of SUPW and Health and Hygiene (Behavioural aspects) is sadly lacking.

Instructional Materials:

We have mentioned the number of books for each subject in the four states. It is noted that, strictly, in accordance with the dictates of the curriculum only major themes and concepts have been taken from the formal textbooks and subsequently separate textbooks have been prepared on them keeping in view the target clientele and also the time available for instructional programme. In language the concentration is on rudiments of linguistic components of language. Thus alphabet, matra, sentence construction, consonant clusters, punctuation have been covered in all states - composition has been left out in Assam. The general themes chosen for expression in Madhya Pradesh and Bihar emphasise on desirable human values, cultural heritage, stories and the natural science and environment are also used in all the four states for the purpose.

In Mathematics, the rudimentary knowledge of four operational skills are the hall-mark of the mathematics texts in all the four states. L.C.M., G.C.M. and Geometry also find a place.

In Natural Science, while there is no science textbooks in Assam, in Bihar some themes on nature, living and non-living, our earth and Universe are included. In Madhya Pradesh and Uttar Pradesh the topics are varied and include nature, planets and universe, minerals, energy, etc. equally distributed in all the books. In social science, while Assam has no textbooks, Bihar, M.P. and U.P. have included geo-physical aspects and socio-economic aspects of India, villages, city, locality, and the natural environment. Lives of greatmen in State are two more common topics in U.P. and M.P. texts. Local cultural and religious festivals, religious variety do not find sufficient coverage.

Except Uttar Pradesh no other state records any detailed account of SUPW. U.P. includes vocations like the tailoring, gardening, simple accountancy and painting.

The textual material is followed by suitable comprehension exercises which mostly relate to knowledge component of the text, except in case of Assam where there are no exercises given at the end of lessons.

In Bihar, M.P. and U.P. exhaustive treatment is given to the social and national objectives as laid down inthe curriculum. In Assam, however, due to non-availability of books in social and natural sciences this aspect has not been adequately covered. In the three states of Bihar, M.P. and U.P. conceptual approach has been followed to infuse these elements.

Emphasis on rural environment followed by urban forms the background of content of these instructional materials; stray examples of tribal and hilly areas are also there. The reference to coastal and desert areas is few and far between. However, all these states claim that there is at least 50% affinity with the life and environment of the clientele in every subject.

In all the four states there is a general satisfaction over the sentence pattern used and their communicability in textbooks. In Assam, M.P. and U.P., sentences of only small and average length have been used in all the books including language. The sentences are mostly simple or compound. However, the books in Bihar are harder as the length of sentences vary from average to lengthy and free use of complex sentences have been made. Yet it is claimed that communicability is not reduced. The teachable words vary in different states at different levels.

Bihar, Madhya Pradesh and Uttar Pradesh are unanimous in their satisfaction over the wide coverage given to the health and socio-attitudinal aspects in the lessons. But Assam maintains that the contents of the two language textbooks prescribed do not reflect these aspects at all.

It is commonly found that the illustrations in texts of Bihar, Madhya Pradesh and Uttar Pradesh tend to be more urban based.

Methods of Teaching:

Methods of teaching assumes an important significance in NFE programme because of the nature and level of the

clientele and the time available for the transaction of the curriculum. Teaching methods have been referred to in the curriculum (Assam, Biihar, M.P. and U.P.), Training Manual (all four states), Teachers Guide (Bihar, M.P. and U.P.), handbooks (Bihar, M.P. and U.P.), and textbooks (M.P. and U.P.).

The analysis of methods of teaching as indicated in curricula, Training Manuals, Teachers Guides, Handbooks and Textbooks reveal that M.P. and U.P. are in a better position to indicate teaching methods for each subject on a lesson to lesson basis. The teaching strategies in Assam and Bihar are more general. Also it was noticed that although all methods have been indicated in the training manuals, teachers guides and handbooks, the lack of specificity in these materials for teaching a particular theme and concept in a particular subject is quite obvious. Health and hygiene and SUPW receive the scantiest attention in terms of teaching strategies. The environmental approach including excursion, visit to the field is conspicuous by its absence.

Evaluation:

Evaluation is done subjectwise in all the four states but the ultimate target varies from state to state on the basis of its emphasis on formative or summative aspects.

In Madhya Pradesh, and it is its striking feature, there is a provision of award of two types of certificates a) At the end of the programme on completion of the course (even without taking external examination) and (b) For the drop-out in the middle of the course indicating the number of units already covered by him. Besides these, there is the final certificate

awarded by the District Examination Committee on successfully passing the Primary Examination along with other students of the formal system.

Internal assessment takes place during teaching, at the end of unit, quarterly through teacher made oral and written tests; half yearly and yearly tests - mainly oral and written. It is internal in the sense that no outside agency is involved in designing or conducting the test and is primarily meant for diagnostic purposes for learner's achievement and teaching effectiveness. In Bihar internal assessment is done monthly, half yearly and annually till the end of the course. In U.P. unit tests are held for diagnostic purposes. A final written examination at the end of two year programme is also suggested. Though no formal certification is done, the final examination is designed by an external committee at Block level consisting of Headmaster of formal schools supervised by the Sub-Deputy Inspector.

In Assam, there is provision for only one final examination at the end of the two year programme based on teacher made tests. Evaluation, here too, is diagnostic and prescriptive,

As is evident from the above discussion, the tools and techniques are largely teacher made written and oral tests, but also include dictation, activity based observation etc. which have also been mentioned in teachers guides and handbooks.

In short, while the States differ on the ultimate purpose of evaluation of NFE clientele, a provision of an annual examination, quite like the formal system exists in every state mainly

for diagnostic purposes. Despite divergencies, written and oral tests and activity based observation have been commonly accepted as essential techniques for all subjects in all the states.

(c) Partly Integrated Curriculum Model:

The Curriculum:

Andhra Pradesh and West Bengal have partly integrated curriculum for the NFE programme. They have separate NFE curriculum and have tried to integrate the different subject areas and also the content with life, but only partly. In Andhra Pradesh the partial integration was found to be in subject areas i.e. natural science and social science and it is need based and problem oriented. In West Bengal the integration has been visualised with the experiences for better living in the family and the society or in other words the integration of content with life has been attempted. The language offered major scope for integration. In West Bengal three different combinations were reported i.e. language and natural science, language and social science, and natural science and social science.

In instructional objectives have been classified into four areas viz. academic objectives, SUPW objectives, social including national objectives and health and hygiene objectives. In the curriculum of both the States these objectives have been gi as general and specific objectives. While in Andhra Pradesh a general satisfaction was reported with the format of these objectives, in West Bengal the case was different. It was stated there that the language objectives were too general and lack specificity. Mathematics did not lay emphasis on concept development and was not related to life. The need for greater

emphasis on development of proper attitude and values was felt. It was also felt that objectives should be stated in behavioural terms as learning outcomes. Knowledge, skills and attitude areas hould be specified. These were pertinent to all the subject areas in West Bengal. Andhra Pradesh reported satisfaction with format of the curricular objectives of NFE.

In Andhra Pradesh integration between Natural and Social Sciences has been visualised in terms of integration of themes and topics of the two subject areas. Six topics of Natural science and fourteen topics of social sciences have been integrated. Language and Mathematics are taught as subjects. In language 61 themes have been identified and in Mathematics nine. In West Bengal one topic of natural science has been integrated with the language and 10 topics of social science have been integrated with the language. In language twenty-nine topics have been listed in the curriculum. These have been graded for each year of instruction. Similarly Sciences (both social and natural) have thirteen topics, twenty-three in Mathematics and thirteen in the areas of SUPW, Health and Hygiene etc.

Andhra Pradesh does not provide us a clear picture of total instructional hours under NFE except that it is two hours every day. In West Bengal there are 330 for instruction and 110 hours for extra-curricular activities.

There are five textbooks of language in Andhra Pradesh, and three in West Bengal, four and three in Mathematics in these two States respectively. Andhra Pradesh has three textbooks for natural and social science integrated

while West Bengal has one each for Environmental Studies and social awareness. As such only textbooks are the instructional materials in both the States, except in case of West Bengal where one supplementary Reader of general nature covering environmental and social awareness is there.

The teaching methods suggested in the curriculum are both organisational and instructional. In Andhra Pradesh the methods are organisational in nature e.g. field trips, collection of materials and exhibition whereas in West Bengal noticeable mentions are obtaining the help of the local persons and experts, community resources grouping of learners' to entry level abilities, discussions and meetings. The instructional methods in Andhra Pradesh mentions demonstration, observation and question answer, drill etc. but in West Bengal specific mention of AV aids, Role play and puppet shows have also been made.

The curriculum in Andhra Pradesh does not make any mention of evaluation. The curriculum in West Bengal is classified in terms of knowledge, skill and attitude and the tools and techniques mentioned are: pupils record card, pupil's diaries, observation, oral and written tests etc. The frequency for evaluation in different subject areas have been suggested as follows in West Bengal: monthly for language and Mathematics, quarterly for health and hygiene, half yearly for social sciences, natural science, SUPW and a comprehensive evaluation of personality and behaviour. Andhra Pradesh curriculum does not mention any frequency. Similarly, tools and techniques are also not mentioned in the curriculum of

Andhra Pradesh but in practice it is oral and written test whereas in the case of West Bengal maintenance of a comprehensive pupils record card has been mentioned in the curriculum.

Instructional Materials:

In Andhra Pradesh, there are quite a few instructional materials for NFE scheme. They are textbooks, teachers guides, training manual and evaluation materials. Among the textbooks there are five for Telugu language (of which one is for tribal areas), four for mathematics and three for integrated sciences (Natural + Social Sciences). For each of these books, teachers handbook have also been prepared. A training manual for the training of field functionaries has been developed. Although there is no evaluation material prepared as such but exercises given at end of lessons help in evaluation.

In West Bengal eleven instructional materials at the primary level of NFE have been prepared. Two are the textbook for language (one for rural area and one for urban area). Three are for Mathematics, two books for natural and social sciences and one for health and hygiene. Each of these books has an accompanying teachers guide. But these materials are still in manuscript form. At the moment Bengali readers and primers and books prepared by voluntary organisations like Lok Shiksha Parishad of Ramakrishna Mission, Narendrapur have been approved by the Government for use in NFE.

The sociological aspect of the instructional objectives have been covered in Andhra Pradesh in its various

books. Same is the case with West Bengal. Conceptual approach has been followed in both the States and the themes are closely related to environment, keeping in view the rural and urban background. The number of teachable words in Andhra Pradesh are 300, 250, 106, 120, and 180 in the five books respectively while in West Bengal it varies from 200-350 in each of the six books. The sentences in case of book I and II of Andhra Pradesh are small and of book III, IV, V are average in length. The communicability is satisfactory. In case of West Bengal too the length of sentences are average and simple in construction facilitating the communication, except in Book 3 and Book 4. Where this is quite difficult. Exposure to vocabulary has been found to be adequate in both the States. Communicability of language books in West Bengal was found to be average and it was felt that the language books should be written with a view to promoting systematic development of language skills. Personal and social needs are adequately covered in the language books of Andhra Pradesh, while in West Bengal it is reported to be inadequate. Illustrations are close to the learners environment and are adequate in both States.

The textbooks of Mathematics in Andhra Pradesh cover academic and sociological objectives adequately, whereas in West Bengal it was noted that the sociological objectives were only partially covered and there is a lack of scientific outlook in them. The conceptual approach has been followed in the presentation of leessons in Andhra Pradesh. Here, it is also reported that personal and social needs are adequately

covered; that communicability of the text is satisfactory; that themes are closely related to environment, and that illustrations are according to the geographical locations. In West Bengal, on the other hand, conceptual approach is absent in the first two books for beginners, but it is there in subsequent books, and social and physical aspects of rural and urban life have been kept in view in the first book for the beginners. Communicability is good but the coverage of personal and social needs was inadequate. Illustrations are far from the environment and it may be advisable to have a fresh look on these aspects in West Bengal.

In the textbooks integrating social and natural sciences in Andhra Pradesh, sociological objectives of the curriculum are adequately covered, the exercises are adequate, themes are related to environment and sentence patterns are satisfactory and have adequate communicability. The personal and social needs of the clientele are adequately covered and illustrations are relevant to geographical locations. In West Bengal in the textbooks of natural sciences, sociological objectives have not been highlighted and there are no exercises to develop the sociological insight. Neither scientific outlook nor conceptual approach is observed. The treatment has also not been environment specific. Exposure to appropriate vocabulary is also inadequate. The pattern of sentences leading to communicability is, however, average. It is, therefore, felt that the textbooks of natural sciences in West Bengal should centre round the environment and socio-economic development.

They should focus on the improvement of quality of life keeping in view of the objectives of NFE.

In case of social sciences only West Bengal features in the analysis. This subject is integrated with Natural science in Andhra Pradesh. Though sociological objectives have been satisfactorily covered in West Bengal, the conceptual approach has been forsaken. It deals with urban, tribal, rural, hilly and coastal areas regarding the environment. The length of sentences was average and communicability was fairly satisfactory but personal and social needs have not been taken care of. Illustrations are also not related to the environment. In the book on health and hygiene, sociological objectives are partially covered. This book is incomplete in many respects as health aspect is totally missing. Also, the conceptual approach has not been adopted.

There is only one supplementary reader for the entire three year duration in West Bengal, there being none in Andhra Pradesh. It covers a wide spectrum and thus has many limitations. It was felt that more supplementary readers based on different environmental backgrounds may be developed.

Method of Teaching:

In the various materials developed in the two states the teaching methods suggested in Andhra Pradesh are lecture, question-answer, drill, demonstration, observation, discovery and self-learning; while in West Bengal discovery, self-learning and work oriented techniques have not been mentioned. However, use of multimedia and projected and non-projected aids have also been mentioned. A few of the suggestions have,

however, been offered such as greater emphasis on systematic and guided observation and use of discovery and self-learning techniques, utilising local sources and resources in the learning process, field trips etc. for environmental approach, use of mass media, wherever possible and individual and group instruction techniques.

Training Programme and Personnel:

In Andhra Pradesh a training manual for training has been developed for NFE personnel - instructors and supervisors which is of 15 days duration for the former and 5 days for the latter. The content of training includes the needs and philosophy, pedagogical and psychological principles, methodology, evaluation, maintenance of accounts, attendence, admissions, stock registers etc. The programme for supervisors has more emphasis the above administrative aspects. No training manual has been prepared in West Bengal, though there is a training scheme in existance with the following content: concept and need of NFE, methodology, teaching techniques, planning and evaluation work, preparation of instructional aids, practical training like field trips, case studies, contact with parents etc. This is a one week programme and is held as and when required.

Pupil Evaluation:

The pupil evaluation as revealed by the study of curriculum, teachers guide, training manual etc. in Andhra Pradesh is mainly formative in nature. It is undertaken during the teaching learning process at the end of the unit and at the end of the programme. Only in the last case it is summative. There is no provision for final evaluation for certification. The tools for evaluation are written and oral-

teacher-made tests. There is some indication that skill and attitude could be evaluated as observation. Assignment also finds place in evaluation techniques in the areas of sciences.

In West Bengal, the analysis reveals that the type of evaluation at different stages is formative and summative. There are different frequencies for evaluation, as mentioned earlier. Evaluation is internal only through teacher-made written and oral tests. Observation also finds a place in this scheme and there is a comprehensive record card.

No evaluation of the NFE programme has been undertaken by any state or other agency in either of the States except the present one.

(D) Integrated Model

Curriculum:

Rajasthan is the only State that follows this model. The integrated curriculum for NFE was prepared by the State Institute of Educational Research and Training, Udaipur. Except Mathematics all subjects have been integrated at the Primary level viz. language (Hindi), environmental studies, SUPW, health and hygiene. The duration of the course is two years with two hours of daily instruction. The objectives of the curriculum are academic, SUPW, social (including national) and health and hygiene. The contents have been significantly integrated with life and it is strictly in accordance with the needs and problems, situation and life style of the learners. The objectives stated in curriculum indicate the development of knowledge, skill and attitude pertaining to SUPW, health and hygiene, family, society

and the nation. These objectives are only partially covered through the content. The curriculum also does not state specific objectives. The format of the objectives should be improved to include specific objectives. There is partial satisfaction with the objectives stated in terms of behavioural outcomes and competencies.

There are five books in all prepared by the SIERT in accordance with the objectives of the curriculum. Language, natural and social sciences, SUPW and health and hygiene are integrated in the three books. The two other books are on Mathematics. Various topics and themes of different disciplines integrated together are: Language - 19 themes with 43 topics, Natural sciences - five themes with 26 topics, social science - 24 themes with 74 topics, SUPW - nine themes with 39 topics, Health and hygiene - 11 themes and 34 topics. Mathematics is not integrated but has nine themes with 22 topics. The total curriculum is covered in two years time with two hours of daily instruction. There is no specific mention for the SUPW and extra-curricular activities. There is no mention of methods of teaching at this level nor is there any mention about any formal evaluation of pupil achievement. However, it has been reported that there is a constant and continuous evaluation at the end of every unit on the basis of a set of eleven unit-tests developed by SIERT. There is no workbook. A set of 34 supplementary readers dealing with literacy, social and environmental awareness, SUPW and health and hygiene, are supplied to the NFE Centres.

Instructional Materials:

There are five books being used as instructional materials out of which two are for mathematics and three are for language integrated with other subject areas containing the concepts of linguistic skills, sociological aspects, environmental studies, natural sciences, SUPW, health and hygiene in an integrated form. The introductory book "Gyan Deepika" does not contain exercises but the remaining four books have sufficient exercises, but those exercises cover only partly the oobjectives of various discipline areas and need improvement.

Since the instructional materials are integrated, a subjectwise analysis of the content may not be advisable. However, it may be mentioned that Gyan Deepika, Hindi Pahli Pustak and Hindi Dusari Pustak have been written with integrated approach. One book is written with urban environment and two have rural background. The first book has 60 teachable words, the second 250 and the third 80. Sentences are of average length with satisfactory communicability. The personal and social needs of the children are adequately covered. The illustrations are close to the environment of the learners and are related but are not adequate. While integrating natural science concepts, some of the areas were left uncovered which are human physiology, animal kingdom and physical sciences. Similarly, some areas of social sciences could not be covered such as national movement for Indian Independence and broad outlines of Indian Constitution. Besides these, some topics related to the needs, life situations and problems of the tribal, hilly and desert areas need to be included.

Mathematics, being taught separately as a subject, has two books which cover the sociological objectives in the curriculum and conceptual approach has been adopted in their preparation. The themes and topics are close to rural and urban environment but hilly, tribal and desert areas are left out. Social needs of children have been covered in both the books and illustrations are close to the urban and rural background.

There is no mention of any supplementary reader in the curriculum.

Methods of Teaching:

Textbooks, training manual and other training materials reflect the methods of teaching recommended in the process of teaching learning at the NFE centres. These are NFE curriculum, Training Manual, NFE Parichayika, NFE unit-wise - textbook, NFE Sandarshika etc. No teachers handbook or teachers guide has been prepared. Lecture, questions-answer, drill, experiment, demonstration, observation, group discussion, and self-learning have been suggested for teaching and learning process.

Training Programme and Personnel:

SIERT being the agency responsible for training of NFE field workers, it has developed training manual for them having detailed instructions, course content, practical work, demonstration etc. There is a provision of pre-service training to the instructions organised at the Panchayat Samiti level through the District Education Officers, of six days duration. The other supervisory staff is rained by the SIERT directly. The tasks identified for the instructions in the training manual are: (a) survey of the locality for identifying non-enrolled or drop out children, (b) educational responsibilities such as arranging

teaching-learning situations for heterogeneous group, regularity of the centre, evaluation and maintenance of records, contacting different agencies seek their cooperation, organizing extracurricular activities and submitting monthly/periodical reports to authorities.

It would be seen that the tasks identified are to improve the competencies of the trainees through lecture method and practical work.

NFE programme in Rajasthan has no provision for formal examination or certification for NFE at primary level. Constant and continuous evaluation process is observed through unit-wise test-book developed by SIERT. The assessment is recorded quarterly. Social awareness is assessed through observation.

The whole NFE programme has been evaluated thrice by the SIERT.

The above facts reveal some scope for positive action apart from those already suggested in preceeding discussion. It may be pointed out that there is a dire need of accreditation of NFE programme by instituting certification at the end of the course through a suitably devised test, perhaps by the SIERT, to be conducted by block/district level authority.

CHAPTER – III

Curriculum in Transaction

Formal Model

The Curriculum and Instructional Materials:

In J&K, the curriculum of formal schools is being used. But the only thing that is available in the NFE centres are the textbooks. No other materials such as curriculum, syllabus, teacher guides, supplementary readers, workbooks are available in these centres.

In Orissa too, the formal education curriculum is used for NFE centres, both at primary and middle levels. It is, however, not ascertained whether all the centres have a copy of the same. The books used in formal schools are used in NFE centres also, which are ten in number for primary stage, and 16 for middle stage with additional three supplementary readers at the latter stage. It may be pointed out here that out of 21 books approved for primary stage only ten are being used. At the middle level, however, all the approved books are being used.

Methods of Teaching:

In J&K, the major methods of teaching adopted at these centres are lecture and drill and also copying of teacher made notes written on blackboards. While in Orissa, the methods of teaching at primary level in actual practice have not been indicated. At the middle level, however, the methods being used are drill, descriptionn,

learning by doing and demonstration.

Pupil Evaluation:

In J&K, evaluation is done yearly through written teacher made essay type questions and oral test for promotion to the next level.

In Orissa, generally formative and summative evaluation is made. At the initial stage a "Placement-evaluation" is made to ascertain the stage to which the child would fit into. Formative evaluation is done quarterly, half-yearly and annually. At the last stage (end of the NFE course) summative evaluation is made. Oral and teacher made written tests are used as tools of evaluation in this state too.

In both the states, there have been obvious difficulties in curriculum transaction arising out of non-availability of teachers' handbooks and teacher-guides. Further, the time available for covering the entire course is insufficient - apparently because the entire formal schools course is sought to be covered in shorter duration and lesser number of hours. Lack of training to teachers has been identified as the greatest hurdle in satisfactory transaction of curriculum in these states.

Role of Supervisor, Instructor and Community in Curriculum transaction:

The role of supervisor is extremely important, being the guide and the helper of the instructor as also the link between him and the implementing agency. In the J&K, he is the weakest link devoid of commitment, dedication and training. His monthly visits are mostly for checking the records only.

In Orissa, however, the situation is reported to be different, where the supervisory officers of formal system help and guide the instructors in various professional aspects, such as, teaching methods, coverage of themes and topics in lesser period of time. They are reported to play a vital role in establishing a close relationship between the instructor and the community.

In J&K, the general complaint against the implementing agency is their inability to supply the textbooks in time and in sufficient number, and their false promises with regard to scholarship facilities, enhancement of instructor salary, provision of A.V. Aids and sport materials.

The community involvement in J&K is in the domain of helping the instructors with accommodation, seating arrangement, lighting, lavatory etc. In Orissa, however, the community involvement is reported to be in the area of their participation in meeting with the education

officials and instructors. No mention has been made about the areas where the community comes forward to promote the cause of NFE.

On the whole, the picture in both states are somewhat similar. However, in case of Orissa evaluation system seems to be more effective than J&K. Also in Orissa, it has been reported that supervisory staff plays a more effective role in establishing community contact and creating an awareness about Non-formal Education.

Condensed Model

The Curriculum and Instructional Materials

In Assam, a separate curriculum based on objectives and principles of NFE has been developed for primary level, which is subject-wise and is divided in four semesters making a total of two years and the parity with formal system is maintained.

In Bihar too, there is a curriculum for NFE with a view to enabling the learners to get admission in formal schools at various levels.

In Madhya Pradesh, the NFE curriculum is subject-wise based on formal school curriculum and condensed into 18 units likely to be completed in 2 years by an average primary level learner and the middle stage NFE curriculum in 3 years by the learners. The curriculum

is quite comprehensive as it includes the manual and the guidelines for teachers, the unit test scheme and the evaluation book besides indicating teaching method for each topic.

In Uttar Pradesh also, there is a NFE curriculum which lays stress at its equivalence with formal system and is subject-wise in nature covering the major dimensions of formal school curricula at both stages, primary and middle.

The instructional materials in Assam, at the primary level, are four textbooks for pupils and three for instructors consisting of the curriculum, teacher handbook and model text items. The last one is cyclostyled and hence a logical inference would be that it would not be available in all the NFE centres. There is also a Training Manual. There are no textbooks available to pupils on Environmental Studies or Supplementary Readers or Workbooks or any A.V. aids, Charts or Maps etc..

In Bihar, the instructional materials available at the NFE centres are the textbooks usually on literacy and numeracy skills, Environmental Studies, Social Awareness, General Science, Health and Hygiene. At the middle level, however, the formal set of books are used.

In Madhya Pradesh no special books have been prepared for NFE children. The books used in the formal system are also used in NFE centres at both, the primary and middle level.

In Uttar Pradesh separate set of books have been developeed and supplied to NFE centres, although their equivalence with formal system is primary consideration. There is no report of any other material having been supplied to the NFE centres, either at primary or middle level such as teachers handbook, teacher guide or the like.

Method of Teaching:

In Assam, it has been reported that lecture (93%) and learning by doing (43%) are the most popular methods in NFE centres, Role playing and Demonstration has been reported too (7% each) while description (14%) is also used.

Bihar does not indicate to the percentage of instructors using different methods. They, however, have indicated a list of methods that are being used, viz. conversation and group discussion, story-telling, folk songs and poems, role play and dramatisation, play-way methods, field trips and excursions, observation, demonstration and learning by doing.. It has been reported that learners are divided into groups according to their achievement levels and monitorial system to teach them is adopted.

Madhya Pradesh is following the instructions given in the NFE curriculum which is divided into 18 units and against each unit the method of teaching is indicated. The instructor adopts the method of teaching so indicated for the specific unit. They have not mentioned these methods in their report.

In Uttar Pradesh the curriculum suggests story-telling, narration, question-answer, drill, model reading, demonstration, discussion, use of maps and charts etc. At the middle level emphasis is laid on discovery and self-learning methods. However, they do not indicate which of these methods are being used by instructors in practice (as in the case of Assam).

Pupil Evaluation:

In Assam, the pupil evaluation - oral and written- is done while teaching by all instructors, 48% of them evaluate the learners weekly, 30% bi-weekly, 26% quarterly. But what procedure is followed for evaluation is not reported. It is reported that no record of evaluation was kept and a checking of pupils written work showed evaluation was casual in nature with no uniformity.

Bihar has reported quarterly evaluation and oral tests are taken in the initial stages but at later stage, teacher made writen tests replace them. Remedial teaching is reported to be undertaken after the tests at the first stage. Promotional tests from level I to II are held annually.

In Madhya Pradesh, all the instructors maintain a register which shows the unit to which a particular learner belongs and at the end of unit a test is taken to evaluate his progress. The tests are included in the unitwise instructional material as unit evaluation exercise. Thus, the end of a unit is the frequency of such evaluation. At the end of the course hey have to take same examination as the children of formal schools of relevant levels. This, is true of the middle level also.

In Uttar Pradesh, there is both internal and external evaluation as in Madhya Pradesh. In internal evaluation the teacher (Instructor) is the agent who resorts to oral questioning and written answers as per the demand of the situation. Such evaluation is at the end of each Unit of teaching, whereas, at the middle level, besides, unitwise tests, terminal tests are also conducted. The External Evaluation is undertaken at the end of the course of the respective levels, and is conducted (for primary level) by a Committee of Headmasters of Primary Schools of the formal system under the supervision of block level education officer. This test is a written test to nine question papers set by the Committee which ensures its equivalence with formal system. At the Middle level, the learners are required to take junior High School Examination held in the State at the District level.

Role of Supervisor, Insructor and Community in Curriculum Transaction:

In Assam, the instructors get the academic guidance from their Supervisors and other Administrative staff. The Supervisors are qualified persons - Graduate with a degree in Education. However, the Supervisors, themselves have expressed that they face problems peculiar to NFE because of its very nature and at times find themselves in a quandry in solving such vexed problems. The parents and the community have become aware of NFE programmes and its centres, largely through the instructors and it needs to be harnessed.

In Bihar, it is reported that a few instructors do not take interest in contacting parents and the employers of children. The guidance of the Supervisory staff is also insufficient. However, it is reported that, generally, instructors arrange meeting with the community to discuss the welfare of the learners and problems faced in running the centres.

In Madhya Pradesh, it is reported that the higher administrative staff of the district, except the coordinator and the supervisor of NFE, hardly take any interest in the programme. Three instructors have reported getting guidance from the supervisor. Thirty five reported getting teaching aids from the administration, nine reported getting complete cooperation. There is no report on community's role in transaction of NFE curriculum.

In Uttar Pradesh it is reported that the background and training of supervisor does not allow them to play their role effectively. They, as a class, fail to provide academic leadership to the instructors of NFE, and they are not aware of innovative practices devised from time to time to improve teaching-learning programme. The Administration is reported to be least concerned with NFE programme. Thus the programme is not growing as it should. Nothing is reported on community's involvement in curriculum transaction.

Partly Integrated Model

Curriculum and Instructional Materials:

The States of West Bengal and Andhra Pradesh have partly integrated curriculum for NFE programme. It was reported by both the states that the subject-wise curriculum has been prepared for Language and Mathematics and the curriculum has been partly integrated with regard to Natural Science and Science and Social Science.

In Andhra Pradesh 95% of the instructors are using NFE syllabus at the NFE centre, while in West Bengal only 37.5% of them use the NFE curriculum alone and a greater percentage tends to use the formal

education curriculum along with the NFE curriculum.

The instructional material have been developed exclusively for NFE by both the states. In West Bengal there are three language books, 2 Mathematics book and 1 Book on health and Social Studies which are in use at the NFE centres, but a large percentage of the instructors depend on both NFE and FE books which tends to increase the load on the learners. Again, in West Bengal the non-availability of NFE books in sufficient number and in time was reported by a majority of respondents (instructors).

In Andhra Pradesh, it was reported that the books prescribed for NFE programme are taking more time. Yet it is being covered in stipulated time, except Mathematics I, II and III. In general all the books take more time to complete than is provided in the NFE curriculum.

Methods of Teaching:

In Andhra Pradesh 75% of the instructors are adopting the drill method in Language, Mathematics and Environmental Studies. 10% further state that they are using story-telling and demonstration methods. West Bengal report indicates similar trend. The most commonly used methods are Drill and Story-telling.

In Andhra Pradesh 80% of the responses indicate that the instructor is adopting the 'grouping technique' in managing the centre on the basis of the entry behaviour. In West Bengal, large number of respondents organise their centres on the basis of age and entry behaviour. Work assignment and group activities appear to be the most common practices of management in both the States.

Pupil Evaluation:

In Andhra Pradesh it was reported that 80% of the instructors are evaluating the performance of the learner fortnightly and half-yearly. It was also stated that they are undertaking, the evaluation both for promotion and for remedial teaching purposes, while in West Bengal the purpose of evaluation is assessment of progress, and the most common frequencies of evaluation are half yearly and yearly, although evaluation during teaching and after the teaching of each learning unit has been recommended in their curriculum.

Role of Supervisors, Instructors and the Community:

In Andhra Pradesh, 90% of the responses indicate that the centres are supervised 3 times in a

year by the supervisors and only once by the district offiicer. West Bengal report indicates the same and it was reported by them as "Centres are most infrequently visited". However, Voluntary Organisation's centres are visited atleast once in three months and often once in a month. It further points out that instructors expect advice and guidance on teaching methods, organisational matters and techniques of evaluation etc. While, in Andhra Pradesh, the instructors feel the need of advice on instructional strategies and remedial instruction from the Supervisors.

It was stated by both the States that instructors are trying to involve community more and more in the programme. Generally, the instructors visit the parents, panchayat people and community leaders etc. for enrolment of learners and retention drive.

The foregoing exposition brings out and that supervision is quite weak link in both the states. The expectations from supervisors are more in the nature of guidance which apparently is not being fulfilled. In addition to this, the supply of instructional material is not timely and smooth which leads to obvious problems as using formal schools material over and above the NFEmaterial (as and when supplied). This makes the system more heavy which is contrary to the basic philosophy of NFE.

Integrated Model

Curriculum and Instructional Material:

Rajasthan is the only state which has integrated curriculum for NFE programme. It contains Language (Hindi), Environmental Studies, Mathematics, SUPW and Health and Hygiene. There are three books developed on the integrated approach for the respective levels for Language, Social Studies and Natural Science and two books for mathematics separately. No Workbook or Supplementary Reader has been prescribed for the use of NFE Learners.

Teaching Methods:

In spite of several teaching methods having been suggested in the Curriculum and Teacher's Guide, the most commonly used are story-telling, question-answer and play-way methods.

The children are divided into groups according to their achievement level, for purposes of instruction. The study reveals that out of the 40 NFE centres of the four Blocks the class management of 58.33% NFE centres was found 'good', while, that of 25% centres were 'average' and only 16.67% of NFE centres had 'poor' class management. No centre had excellent class management.

Pupil Evaluation:

There is no provision for formal evaluation but there is concurrent evaluation for the learners through oral test and observation of behavioural changes of the learners. The academic evaluation is done mostly through unitwise test developed for ,the purpose and the exercises given in the text books. No formal examination is held at the end of the course. The products of NFE can enter a formal school after they qualify in the admission test held by those schools for the purpose. The Social, Vocational and National Objectives are evaluated through observations.

The Community Participation in Curriculum Transaction:

The present study reveals that the instructors take all possible steps to ensure the community participation for obtaining proper accommodation, facilities of drinking water and lighting arrangement etc. However, it does not indicate whether community is involved in actual day-to-day transaction of business in the NFE centre.

The data further indicates that the Supervisor provides adequate guidance to the instructors to develop and improve their competencies and he maintains continuous and constant personal contact with the community including parents, leaders and

developmental authorities for solving the problems ofthe NFE centres, pertaining to their location, accommodation, lighting and drinking water etc.. He sometimes mobilises their cooperation for providing incentive to the NFE children in the form of mid-day meals and free uniforms. It helps in enrolment and retention drive.

CHAPTER - IV

The Instructor

The instructor occupies the pivotal role in the total scheme of NFE. He is the actual person who translates the scheme of NFE into action. In this chapter an attempt is made to ascertain how well is he equipped to do the job expected of him/her. We shall try to examine this aspect in different states following different models:

Formal Model

Instructor's Profile:

In J & K, in all 39 instructors were interviewed of which 58.97% were male and 41.03% female; only 2.56% belonged to SC/ST category while all the rest i.e. 97.44% were of other than SC/ST. All of them were local persons (100%) and were untrained. Of them 5.12% were graduate, 61.54% were matriculates (High School) and 33.33% were middle pass. 64.10% had agriculture as their main occupation, 15.38% had this part time job of NFE instructor as their main occupation. 10.26% were students, 7.69% had government service as their major occupation, 2.56% were potters.

Orissa had about 85% NFE male teachers and 15% female teachers. Only 15% belonged to SC/ST

category while remaining 85% were from 'Others' category. About 90% of them were local while remaining 10% were non-local. Approximately 41% were trained in NFE and 59% were untrained. About 82% were matericulates, 15% were middle pass and about 3% were graduates. Only about 36% had agriculture as their main occupation, 62% had NFE instructor as their main job and about 2% were in govt. service.

Training of the Instructors:

There had been no training of any instructor in J&K.

In Orissa, too, there has been no exclusive training in Non-formal Education. Yet the regular Teacher Training Syllabus prescribed by the Board of Secondary Education (C.T. Course) included a component of Non-formal Education for pupil-teachers who undergo training in the Teacher Training Schools in the State. Even the teacher trainers were not originally trained but of late are being oriented in NFE by SCERT for a period of ten days.

There is no training manual in either of the states. The training programme for teachers which has only a component of NFE in Orissa has been described as having 130 hours of instruction in a period of two

years comprising of 10 hours of theory, 80 hours of practicals, 10 hours of field work, 10 hours of demonstration and 20 hours of maintenance of records.

The inservice programme by SCERT is of 10 days duration (60 hours approx.) which is mainly theoretical in nature.

Lecture-cum-discussion method, group discussion, field trips etc. are used as methods of training.

The evaluation of NFE trainees takes places during the training and at the end of the course these methods are used in both the two types of courses mentioned above.

Thus it would be seen that comparatively, Orissa has an edge over J&K as far as training of the instructor is concerned. It, however, leaves much to be done. In J&K, the training has to be started on a clean state, while in Orissa, there is a need of systematisation and organisation such as drawing up of a training manual, development of training package etc..

Condensed Model

Instructor's Profile:

Out of 40 instructors interviewed in Assam, 55% were male and 45% female, 12.5% belonged to SC/ST communities while 87.5% are from 'Others'. They have

not reported the distribution of local or non-local instructors. About 33% ofthem have agriculture as major occupation and the rest are not engaged in any major occupation. All the instructors are H.S.L.C. pass. 60% of them have received five to ten day's orientation training in NFE organised by the Directorate of Elementary Education, Assam. Only 9% of them had some experience of teaching in an elementary school, 5% in adult education, and remaining 84% had no experience of teaching. The instructors are reported to be mostly unemployed who are looking for some job and the present part time work of NFE instructor is just a filler.

In Bihar, out of 90 instructors interviewed, there are 57.5% male and 42.5% female instructors. 35% of them are SC/ST while remaining 65% belong to 'Others'. All of them (100%) are local persons. 12.5% of the instructors are graduates, 7.5% are intermediate, 75% are matriculates, 2.5% each are middle and Sanskrit Madyama. 40% of them are mainly agriculturists, 2.5% are potter, 57.5% are not employed except in household activities. 90% of them have received training in Non-formal Education.

In Madhya Pradesh, 46 instructors were interviewed, out of which 67.3% were male and 32.6% female, 41.3% belonged to SC/ST and remaining 58.7%

were 'Others'. 91.3% were local and remaining 8.7% non-local and 56.5% were trained in NFE while 43.5% were untrained. 17.4% of the instructors are graduates, 52.2% are high school pass and 30.4% are middle pass. 50% are trained though not in NFE, (the report indicates hat "out of 26 trained 23 have been given science training and 3 are fully B.T.I. trained). Regarding major occcupations of these instructors, the distribution is approx. 54.4% teachers, 34.8% agriculturists, 6.6% in other services annd 4.3% engaged in tailoring at home (women instructors).

In Uttar Pradesh, out of a total 75 instructors interviewed, 68% are male and 32% female. They are reported to be "primarily educated person of the locality" but their exact distribution into local/non-local categories has not been indicated. Also it has not been indicated as to how many of them belong to SC/ST communities. 33% of them are graduates, 53% are High School Pass (Matriculates) 14% are middle pass. The male and female instructors have identical distribution with respect to qualifications. Every instructor is reported to have received a six day pre-service training in NFE followed by a four day in-service training in subsequent year, which is organised by the SCERT at District Level.

Training of Instructors:

In Assam, the training programme for the instructors was of five day duration till 1983 and then the period was extended to 10 days and is organised by the Directorate of Elementary Education at selected Basic Training CColleges (BTC). The training programme includes the concept and philosophy of NFE; Child psychology with special reference to problems faced in NFE situations; Methods of teaching Mother tongue, Mathematics and Environmental Studies, individualised instructional methods providing remedial teachings, Management of NFE centres, Centre-community relations, problems of wastage and stagnation; evaluation of children and techniques thereof. The methods adopted are lecture-cum-group discussion, demonstration and partially workshop and simulation techniques.

Evaluation of the trainees in Assam, is done through written examination on the last day of the training. The question paper contains test items relating to contents covered in theoretical discussions. The answer scripts are assessed and recorded. There is no mention of any training manual or other training material. It is, however, mentioned that the training is conducted by the Coordinators of NFE, who, themselves have no training in NFE.

In Bihar, the training is organised by the Project Officer of Adult Education under the supervision

of the District Adult Education Officer and the trainers are selected by him from a variety of educational functionaries such as Teachers in Primary Teachers Education Colleges, Supervisors of NFE and Adult Education, Block Education Extension Officers etc. The training is between one to two weeks, with varying number of hours depending upon the nature of the course - residential or non-residential. In the former case it varies from 8 to 10 hours per day and in latter case, it is 5 hours daily. The topics and themes covered in the training are: basic acquaintence with the concept of NFE, curriculum of NFE, organisation of NFE centres, methods of community involvement, methods of teaching, the concept of learning by doing, techniques of evaluation, remedial teaching, use of books and other teaching material and maintenance of records. The methods adopted in the training programme are: lecture-cum-discussion, field trips, demonstration, amnd sometimes role-play. Evaluation of the programme is done by method of assessing the participants reaction through questionnaries and also their assessment in practice teaching in NFE centres.

In Madhya Pradesh, the trainers of the instructors are District Coordinators of NFE, Supervisors of NFE and subject experts from B.T.Is. The initial training programme of the NFE instructor is of eight days duration with six hours of daily work, with either two hours theory and four hours practical or three hours theory

and three hours practical work. As many as nineteen topics are covered in the course in the broad area of Concept of NFE, Needs of NFE, NFE curriculum, Universalisation of Elementary Education, Learning Theories, NFE centre - its organisation, community's involvement in it, Preparation of Need Based Materials and Evaluation Tools etc. The method adopted in the training programme include lecture-cum-discussion, group discussion, workshop method, simulation techniques, demonstration, case studies, use of A.V. Aids and work study projects. There is no evaluation method indicated by them but the impact of training programme is assessed by visiting the NFE centres where trainees work and also by discussing with local people.

In Uttar Pradesh, the initial training of six days duration with six hours of work every day is organised at Government Formal Schools. It is followed by four days' training in subsequent years. The range of content is quite wide for such a short duration of training programme. The following get high priority: Problems of Elementary Education, Concept of Need Based Learning and theory of learning, Concept of NFE and Organisation of NFE centres etc. The following receives average priority: Need for NFE, Centre and Community interaction, Methods of Self-Learning, Learning by doing, Techniques of Evaluation, Community Survey etc. The low priority items are: Concept of Life Long Learning, Preparation of evaluation tools, Preparation of Need-Based

learning materials. The most used methods in teaching during the training are lecture-cum-discussion, visits and demonstration. The averagely popular methods are: Community survey and talks by resource persons followed by group discussions. The least used methods are: group discussion, simulation techniques and use of A.V. Aids. The theory and practical time ratio is usually 3:2. There is no training manual and the training materials are taken from various sources as NFE curriculum, NFE textual materials and handbook. The programme is evaluated mostly by visiting the centres, discussing with parents and instructors themselves. Usually discussions with supervisors and local people is also employed as a method for evaluation. It is rarely that an evaluation tool is administered to the instructors. The trainers of the Instructors themselves have very little training in NFE and largely come from the formal system. The only training they had was a three day training by the S.I.E..

Partly Integrated Model

Instructors Profile:

The data reveals that in Andhra Pradesh 30% of the instructors are female. Agewise classification is not reported. 50% of the instructors are SC/ST. The qualification of the Instructors range from matriculation to B.A. but their detailed break up has not been reported.

90% of the instructors are unemployed youth and are local persons. 80% of instructors are working at the NFE centres for the last four years. Only 10% of them are working for the last five years. It was also reported by Andhra Pradesh that only 25% instructors are untrained and 75% of the instructors underwent training for period of 10 days in the NFE programme. However, 90% of the instructors had no previous experience in teaching methods.

The profile of the instructors as emerges from the West Bengal reveals that 75% of the NFE instructors are male and only 5% instructors are SC and none is a ST. About 90% of the instructors are reported to be local persons i.e. living within the radius of 5-6 kms. The academic background of the NFE instructors indicate that 22% instructors are graduate, 35% are higher secondary pass and 43% NFE instructors are secondary pass. As far as training of the NFE instructors are concerned in West Bengal, 57% in case of men and 12.5% in case of women instructors are not trained. The problem of untrained instructors is reported to be serious as the trained instructors keep leaving the job on finding better employment. About 42.5% are such who have been instructors for three years and 57.5% are unemployed persons.

It may be concluded that in both the States the NFE instructors are unemployed youth with the qualification ranging from matriculation to B.A. and they are working at the NFE centres for last 3 to 4 years and in West Bengal

those with NFE training are much less in number as compared to Andhra Pradesh.

Training of Instructors:

It was reported from Andhra Pradesh that there was Teacher Training Institutes which organise training programmes for NFE instructors. West Bengal also reports that there is a programme of Orientation Course for NFE instructors, which is organised with the assistance of teacher educators, working in selected Govt. or Govt. sponsored Junior Basic Institution located in different districts. Voluntary organisations also organise orientation programme for NFE instructors.

In both the States the duration of the in-service training programme is seven days with five hours of work everyday. However, in West Bengal, the duration of daily work vary from five to nine hours and usually more time is given to theoritical content. The data further indicates that in Andhra Pradesh, there is a provision for refresher course of three days duration with five hours daily in subsequent years while in West Bengal there is no refresher course of any kind.

The specific tasks identified by the teacher trainer of Andhra Pradesh are to develop functional literacy among the NFE learners, to develop proper habits, attitudes and values for better living and to develop awareness about the social problem for improving the environment among the

NFE learners. West Bengal also identified the same tasks with addition of three more viz. motivating NFE learners, promoting attitude for self-employment and developing sense of citizenship.

Both the states endeavour to develop the following competencies in instructors: identifying learner's learning needs, developing proper communication skills among them, evaluating learners progress, maintaining records, and developing competency for purposeful discussion with children, parents etc. However, West Bengal has added few more in the list, namely, individualising instructional methodology, promoting competency for self-learning among children.

The responses of both the states reveal that the content of the teacher training programme covers the following areas: concept of education; concept of NFE; curriculum of NFE, problems of enrolment; wastage, stagnation and retention; concept of need-based learning; organisation of a NFE centre; techniques of evaluation; community survey; preparation of evaluation tools and preparation of need-based learning materials. Apart from these common content areas West Bengal also covers some more areas such as theory of learning, concept of life long learning, methodology of self-learning and identification of the problem of NFE centre etc..

The following are the common methods/modes of training as in these two States: lecture-cum-discussion, group discussion, talks by resource persons followed by discussions and visits and field trips etc. In addition, West Bengal has case study and use of Audio-Visual Aids.

As reported by both the States the teachers training programme has not been evaluated. It was also reported that there has not been any systematic effort to evaluate the impact of the training programme. However, the teacher trainers have tried to gauge the impact of training by visiting the NFE centres, discussing with the local people, parents, instructors and supervisors and in some case with NFE learners too.

Integrated Model

Profile of the NFE Instructors:

In Rajasthan 90% of the NFE instructors are male. None of them belongs to SC/ST communities. 80% instructors are trained. They have received in-service training sponsored by the SIERT, Rajasthan, Udaipur and organised by th District Education Officers concerned. All the NFE instructors are local.

The academic qualification of the 75% NFE instructors are middle pass, 20% are High School pass and only 5% instructors are graduates. 68% of them earn their livelihood through agriculture and animal husbandary,

18% of the instructors have no source of income except the remuneration for working as instructors of NFE centres. The remaining 15% instructors are skilled labourers.

The study further reveals that the period of stay of 63% instructors at the NFE centre is one to two years, while 35% instructors have been working at the NFE centres for more than two years. Only 3% instructors have been working for six months only.

Training of the NFE Instructors:

The State Institute of Educational Research and Training (SIERT), Rajasthan is the sponsoring agency for organising the in-service training programme for NFE instructors. The duration of this training programme is six days.

The training of instructors is organised at Block level by the District Education Officer through resource persons who are generally Supervisors, Assistant Project Officers and other senior experts of NFE programme, and who themselves have been trained. The specific tasks of NFE instructors as perceived by the teacher trainers are to develop functional literacy among NFE children, to motivate them for education, to develop proper habits, attitudes and values, to promote attitude for self-employment, to help children in understanding and appreciating their environment, to develop sense of citizenship as agents of

social change and to develp awareness about social problems. The specific competencies proposed to be developed in the trainees during the training programmes are - identifying learner's learning needs for personal and community development, to adjust and to develop the curriculum according to local needs, to impart social skills, to evaluate pupil's progress and to maintain the records for feed-back and to develop competencies of purposeful discussion. In addition to these competencies about 88% of the teacher trainers have added few more competencies viz. to provide remedial teaching, to use multi-media in learning process, to develop awareness about problems of community and environment and to promote competencies for self-learning among children. Again 63% teacher trainers have further suggested the following desirable competencies as the purpose of the training to develop proper communication skills, to provide individual instructional techniques and develop occupational skills in children.

The training programme is in-service in nature and is of six days duration, with 6-8 hours of work daily. This is purported to be specific to the needs of the instructors and is task oriented and competency based. 88% teacher trainers have reported that there is no arangement for any refresher course. The training programme contains theory as well as practice sessions. Under theory, fifteen talks are delivered on different topics. The content of the training programme includes - concept

of NFE programme, universalisation of elementary education, theory of learning, organisation of NFE centre, and school and community interaction. Again 88% teacher trainers have also reported that the content of training also includes the concept of education, curriculum of NFE, concept of learning by doing, visit to NFE centre, identification of the problems of the NFE centre and community survey, 75% of teacher trainers have mentioned that the content includes concept of life long learning, techniques of evaluation and preparation of need based learning methods. Again 75% of the teacher trainers report that the methods of training are: lecture-cum-discussion, group discussion, workshop technique, talks by resource persons followed by discussion, field trips and demonstration. 88% teacher trainers have stated that the effectiveness of the training programme has never been evaluated but they have an impressionistic view that the training programme has great impact upon the beneficiaries, which is based on their experience of various visits to the NFE centres. No formal evaluation of the trainees has been done att the end of the training programme.

CHAPTER - V

The Supervisor

In the entire system of NFE at work, the supervisor has another kay role to play as he is the one who encourages and guides the instructors and monitors the programme. Therefore, it is of crucial importance to know how far are they equipped to perform the role expected of them.

Formal Model

In Jammu and Kashmir, the supervisors are middle aged persons (35-50 years). They were selected from within the block. 67% are working for about one and half years as supervisor while 33% for less than a year. 67% are matriculates and 33% graduates. Only 33% have some kind of training, namely, elementary education training but none has any training in Non-formal Education. The farthest centre to be supervised by them is 17 kms., 26 kms. and 25 kms. respectively in each of the three of the blocks in our sample - viz, Beeru and Narbal in Kashmir province and Bavi Block in Jammu Province. The distance between two centres varies from 3 kms to 10 kms in different blocks of the State. Although local qualified people are available but the lack of travelling facility, the distance of the centres are also the

hinderance in effective supervision.

In Orissa, however, one supervisor for each block is appointed who have nearly 40 NFE centres assigned to them. They are supposed to check teaching work, check records and guide the teachers in this regard, supervise the management of the centres and seek community participation. Besides this they are also expected to deliver model-lessons, organise orientation courses for the NFE instructors, ascertain needs of centres and suggest means to fulfil them, help in evaluation work at the NFE centres and enlist community cooperation.

The shortest distance from the residence of a supervisor to NFE centre in Orissa is reported to be 8 kms in our sample and the farthest is 60 kms. The maximum distance between two centres supervised by a supervisor is reported to be 46 kms.

In J & K, the supervisors do not have any training in NFE, while supervisors in Orissa are intermediate pass with training (C.T.) which includes non-formal education as part of the course, the details of which has been mentioned in the section of instructors. The NFE centres are also supervised by the inspecting officers of the formal system ksuch as District Inspectors of School, Deputy Inspectors of School and the like.

In J&K, the frequency of supervision varies from monthly to quarterly. In Orissa it has been reported that a centre has been visited as many as eight times a year while frequency to other centres has not been mentioned. The supervisor is obliged to make a total 120 visits in a year to NFE centres but it has not been mentioned if he is obliged to visit all the centres under his charge.

There are obvious difficulties in supervision work such as distance, lack of transport facility, inaccessible terrain and too many centres for supervisor.

The supervisors in Orissa spend about 2 to 3 hours in a centre during their supervision visit which is the total working hour of the centre. In J & K, too it is reported that visit to only one centre in one day is possible implying that the time spent by supervisor in the centre does not exceed two to two and half hours.

In J&K, the purpose of visit by supervisors to NFE centres are as follows: checking the regularity of the centres; looking into academic records and providing academic guidance; seeking community participation and verifying coverage of syllabus, helping instructor in communication in and outside centre. Besides, they are also given the responsibility of distributing the instructional materials to the centres and acquainting the instructor with these materials. This

activity again according to genius and genre of individual supervisor in the absence of any training.

In Orissa, it is reported that the main task of supervisor is to " develop the academic side" of the centres where they play the role of resource persons. The suppervisor, in Orissa, has been reported as having all those qualities as could be expected of an ideal supervisor, such as "learning is made more pleasant and meaningful through the effort of supervisors, they deliver model lessons; "they motivate instructors and learners and makes the atmosphere homely", and "they establish relations with community and wastage dwindles away due to sincere efforts of the supervisors". They have been described as "eyes and ears" through which the higher. officers in the state administration know about the programme!

In J&K, the supervisors reported that there is variation in the levels of motivation of the instructors in running the centre. In Bain block, all the centres are poorly maintained; while in others the instructors are reported to be poorly motivated, reasonably interested and "totally dedicated" with varying percentages. In one block as many as 54% instructors are reported as totally dedicated! Similarly the methods being used by instructors are also ranging from poor to excellent but no definite pattern is emerging. The same is the case withh the academic competence of the

instructors (as reported by the Supervisors). All the instructors are reported to be aware of NFE programmes and the related instructional materials prescribed in the State.

In Orissa, 25% teachers each are reported to the 'taking good care' of the centres, 'totally dedicated', 'reeasonably interested' and 'poorly motivated'. The methods of teaching is reported as 'average' at all the centres, their academic competence is also reported as 'average'. It has been observed that 50% of instructors know about the curriculum, handbook and instructional materials, 25% refer to them, 25% know very little about them.

The supervisors have made an estimation of the learners. In J&K, the learners have been described 'average' in their academic competence in all the sample blocks except one where it is reported as poor. There is no estimation about vocational competence, as work aspect is not there in the NFE programme. In the area of discipline and manners, the situation has been reported as similar to academic competence. In the area of co-curricular activities there is a nil report except one block where it is reported poor. The neatness and cleanliness have been reported average everywhere.

In Orissa, the supervisors observe that the learners "stand in good position" in as much as their academic competencies in literacy, numeracy and environmental awareness is concerned. In discipline, manners and co-curricular activities the achievement of learners are average and in vocational competencies they are poor. In neatness and cleanliness they are reported 'fairly good'.

In both the States it is obvious that the supervisors suffer from the handicap of lack of adequate transport facilities, inadequate or no training at all, and timely supply of instructional materials.

The Condensed Model

In Assam, the supervisors of NFE are designated as Sub-Inspector of Schools NFE and are posted at Sub-Divisional headquarters. They are attached to Deputy Inspectors of Schools, and have equal status and emoluments with their counterparts in the formal schools. Depending on the number of NFE centres in a block, one or two supervisors are assigned to it. The study reveals that work load of supervision varies from 22 to 105 NFE centres per supervisor because of absence of any clear cut norms in this respect.

The age range of the supervisors in our sample varied from 32 years to 40 years. All of them were graduates (in Arts and Science) and all have a Bachelors degree in Education. None has any training in NFE. Their supervisory experience varies from 9 months to one and a half years, 80% of them have had experience of teaching

in a Secondary School.

In Bihar, 2 or 3 supervisors are appointed under one Project Officer. Each of them is assigned 20 NFE centres on an average and is paid Rs.15/- per centres per month. All the supervisors in our sample were graduates, none had any training in education in any Teachers Training College and all of them had one year supervisory experience. All of them have had pre-service training in NFE, of varying duration from one to two weeks. The number of NFE centres assigned to our sample supervisors varied from 17 to 28.

In Madhya Pradesh, the work of supervision has been entrusted to whole time supervisors with 60 to 80 centres under his charge. All of the supervisors in our sample are trained post-graduates. Their experience in supervising NFE centres varied between one to one and a half years. All of them have had training in NFE supervision, organised by State Institute of Education, Bhopal.

In Uttar Pradesh, in general, two supervisors per district - one male and one female - are appointed for NFE programme. In spite of tremendous growth in the number of NFE centres, there has not been any increase in the number of supervisors. The minimum qualification for recruitment to the post of NFE supervisor is trained graduate. There is no full-fledged training course in NFE,

the recruits are given three days training in NFE immediately after employment. The experience of NFE supervisors in the State ranges from 3 to 5 years. The number of centres for supervisor varies from 70 to 250. In 40% cases it is above 100 (even touching 250). In 40% it is between 70 to 100 and in 20% it is less than 70.

In Assam, the purposes of supervision were indicated as academic guidance to instructor and checking the regularity of the centres by 100% of the sample supervisors, 50% of them gave second preference to guiding and helping the instructors, verifying pupils progress and coverage of syllabus; sorting out academic problems was third in order of priority indicated by all the supervisors. The other purposes of supervision like evoking participation of local people looking into academic records and monthly reports receive lesser attention in the scale of preference.

In Bihar, the purposes, in order of preference, have been listed as : verification of regular functioning of the centre; verification of coverage of syllabus; guiding and helping instructors in their day-to-day work in the centre; solving academic problems faced by the instructors; verification of eligibility of learner; verification of achievement of the learners; checking of registers; encouraging instructors to involve local people in the NFE programme; ensuring maintenance and submission of monthly reports and returns; and assisting project officers in administration of NFE centres.

In Madhya Pradesh, the preferences as indicated by supervisors with regard to purposes of supervision are in the following order: verification of regularity; verification of coverage of syllabus; looking into academic record; sorting out academic problems of the teachers; guiding and helping the teachers; evolving participation of local persons.

In Uttar Pradesh, the pattern of preferences emerges like the following: verification of pupils progress and their academic achievements; sorting out the problems of instructors in academic matters; guiding and helping the instructors in teaching; verification of regularity of functioning of the centre; looking into monthly reports and returns; verification of the coverage of the lessons as per schedule; looking into academic records; evolving more participation of the local people.

It may be noted here that in Uttar Pradesh the primary purpose of supervision has been indicated as checking learners progress and his academic achievements whereas in other states it is checking the regularity of the functioning of the centre. Also the number of centres to be klsupervised by each supervisor is extremely large in case of U.P. and perhaps it is because of this that the pattern is slightly different from other states.

80% of the sample supervisors in Assam have the nearest centre within 1 to 10 kms. and 20% have it

beyond 15 kms. The farthest centre from their residence is between 16 to 42 kms. in case of 64% supervisors and 36% have this between 42 to 60 kms.

In Bihar, the distance of the centres falls within a radius of a maximum of 30 kms and the distance between two centres ranges from 3 to 10 kms.

In Madhya Pradesh, the minimum distance of centre from the residence of a supervisor is 1 km. The maximum distance of a centre from his residence is as much as 100 kms. The distance between two centres ranges between 1 to 8 kms.

In Uttar Pradesh, the nearest distance from the residence of the supervisor ranges from 1 km to 36 kms. In 40% cases the distance is above 25 kms, in 38% cases it is 10 to 25 kms. and in the rest it is less than 10 kms. The farthest centres from the residence of a supervisor ranges between 18 to 193 kms., the 20% having it more than 100 kms, 30% between 50-100. The distance between two centres ranges from 3 to 25 kms.

The frequency of visit to a NFE centre by the supervisors is very much dependent on the number of centres assigned to them, and the distance they have to travel to reach a centre. In Assam, 66% of the supervisor respondents visit each centre every month, 16% once in three months, 16% two to three times a year, and they all spend between one to one and a half hours in the centre.

In Bihar, however, the frequency of visit to a NFE centre has not been indicated but they devote one to two hours at a centre when they visit it.

In Madhya Pradesh, 50% of the respondents report a minimum of one visit to a centre and maximum of three visit to a centre in a year while remaining 50% report a minimum of two and maximum of five visits per centre in a year. They, however, do not indicate the time they spend in the centres during their supervisory visits.

The position of Uttar Pradesh is rather vague as no specific data has been provided in this regard. The time devoted on average per centre is one and fourth hours, the range being one to two hours.

It would thus be seen that there is much more scope for improvement in the supervision of the NFE programme. Some of the apparent areas for improvement are more intensive training of the supervisor to perform his tasks as envisaged in the programme, reducing the number of centre per supervisor, and providing some transport facility, depending on feasibility (a bicycle, may be). Besides there is a need for development of a check list and evaluation tools for use by the supervisors, and establishing a Resource Centre from which the supervisors could borrow (or make use of) the resources for effective functioning of the NFE centres under their charges.

Partly Integrated Model

In both the states, the supervisors are graduates with professional teacher training in primary education. In Andhra Pradesh most of the supervisors were Dy. Inspectors of Primary Schools or Extension Educational Officers in the Block, incharge of Primary Education before becoming NFE supervisors.

In West Bengal, NFE centres run by the State Government are supervised by Assistant Inspectors of Schools and they are entitled to draw TA/DA out of supervisory charges. The NFE centres run by voluntary organisations have their own supervisors, whose salaries are paid by voluntary organisations themselves. Besides the arrangement for supervision, the State Government have authorised two Extension Officers, belonging to the Department of Social Education and Sub-Inspectors of Schools to visit and supervise NFE centres.

In West Bengal, all the supervisors have attended two day orientation course in NFE supervision, while in Andhra Pradesh the supervisors are given training for a period of 5 days.

In Andhra Pradesh the number of centres assigned for supervision are 60 in each block. There is one supervisor for each block. The picture is altogether different in West Bengal. The two Assistant Inspectors have to supervise 747 NFE centres distributed over 14 blocks

and 3 Municipal areas and there is no geographical division of centres between the two Assistant Inspector for the purpose of supervision. In contrast, the supervisor working for the voluntary organisations have between 22 to 60 NFE centres allocated to them.

The data reveals that in Andhra Pradesh the supervisors have to travel a distance between 3 kms to 60 kms. While in West Bengal the supervisors have to travel one and a half kms to 100 kms. and in case of supervisors of NFE centres run by voluntary organisations they have to travel half km to 7 kms.

It was reported by both the states that supervisors visit the centre only 'when needed' and they spend on an average 1 to 2 hours on each visit of NFE centre. The purpose of the visit as reported by these two states are: to give academic guidance and orienting instructors with the new practices, and enlisting community cooperation in the running of the centre.

However, it was reported by Andhra Pradesh that the supervisors also work as a liaison officer between the Instructor and the Educational Officer at the District and State level. The supervisors also undertake the job of acquainting instructors with the new curriculum and the evaluation chart. Further they distribute literature of NFE centres to the Instructors. They also maintain the record of progress of each NFE centre.

The data from West Bengal reveals that the supervisors have given first preference as the purpose of supervision to academic and pedagogical help to teachers, but there is no unanimity of preferences about other tasks, which are: orienting instructors with new approaches to evaluating teachers performance and local problems, etc..

It may be concluded that in both the states the supervisors are qualified, though their training in NFE is not adequate. However, the number of NFE centres assigned to each supervisor varies in these two states needs to be reduced drastically in order to make it more effective. Also the frequency of supervision must increase. Further the necessity of a well designed training programme and supervision check-list, evaluation tools cannot be over emphasised.

Integrated Model

In Rajasthan there are Panchayat Samitees at Block level. The Block Development Officers exercise administrative control over all the functionaries of the NFE programme in their respective blocks. This is done through one supervisor at each block Headquarter. They have been selected from education department in the cadre of post graduate teachers. Each of them is entrusted with supervision of fifty NFE centres in their respective blocks.

It was also reported that there is no female supervisor in the government set up at present. All the supervisors have undergone the six days training in Non-formal Education sponsored and organised by the State Institute of Research and Training, Rajasthan, Udaipur.

The supervisors expressed their views that the purpose of supervision is to sort out academic problems of teachers, to verify coverage of syllabus, to verify regularity and functioning of centre, to evoke participation of local persons, to look into the academic record, to guide and help teachers, to look into the monthly reports etc. and to verify pupil's progress.

Although every supervisor is required to visit each centre under his charge once a month, it has been reported by as many as 75% of them that it is difficult to visit each centre even once in three months.

The minimum distance of NFE centres from the residence of the supervisors ranges between 1 km. to 17 kms. and the farthest is 40 to 110 kms, often in desert, hilly and tribal areas.

75% supervissors have expressed their deep concern about the overlapping assignment pertaining to the developmental activities of the block entrusted to them by the Block Development Officer. This hampers their usual and normal work of supervision. The supervisors have

suggested that they should be under direct administrative control of education department.

The supervisors are supposed to submit a detailed quarterly report of each NFE centre to the District Education Officer on the prescribed proforma. However, only 50% supervisors stated that they reported the progress of each to District Education Officer.

It was reported by the supervisors that for solving the academic problems of instructors they either discuss it with higher authorities and arrange orientation programme for them, or depend upon their own knowledge and experience. However, 75% supervisors reported that they seek help of local school for orientation of centre instructors.

It may be concluded that the supervisors in Rajasthan are academically and professionally qualified though the number of centre to be supervised by them is more than what can be effectively supervised. Also assignments other than supervision of NFE centres do tell upon adversely on their main duties which they cannot perform effectively.

CHAPTER - VI

ACADEMIC ACHIEVEMENTS OF NFE CHILDREN

Each state has tried to measure the academic achievements of NFE learners on the basis of a uniform test (except language) at three levels - level I equivalent to classes I to II of the formal education, level II equivalent to classes III to V of the formal education and level III equivalent to classes V to VIII (Middle level). The details of these tests have already been discussed in earlier chapters but it might be worthwhile, to mention, even at the risk of repetition, that these tests were competency based and not text based. These same tests were also administered to the children of one formal school and their achievement were scored.

However, each state has adopted different modes of comparison, ranging from mean scores to pass percentage. Acknowledging this shortcoming, the best we can do is to view the situation in each state independently without making an inter-state comparison. The level of comparison would, therefore, be the performance of the children of NFE in comparison to those of formal schools. Under these circumstances, inter-state comparison is not possible, although comparison between achievements of non-formal and formal school children is possible and that serves our purpose.

Formal Model

J.& K.: In Kashmir Division the female learners outnumber the male learners in NFE system. At level I (i.e. equivalent to class II of the formal system), the pass perceentage of the **NFE** learners in language is 25.8 . In the same test **administered** to formal school children of class two, the pass percentage was 7.8 . Similarly in Environmental Studies, the pass percentages were 15.2 and 4.1 respectively of these two groups / of children; in Mathematics the respective position was 29.1 and 17.1 . Cumulative pass percentage in NFE and formal school children at this level was 24.3 and 9.7.

In Jammu Division, male children are more than female children in NFE system. The pass percentage of the NFE children in language was 18.1 as compared to formal school children's pass percentage of 12.6. In Environmental studies the respective position of the NFE and formal school children was 21.0 and 32.2 . It would be seen that the formal school children have performed better than their NFE counterparts in this subject in Jammu Division. In Mathematics the pass percentage of NFE children is 39.1 while that of formal school children is 48.5. Similarly the cumulative pass percentage of NFE children was 34.4 and in the formal schools it was 36.7. Thus it may be seen that the performance of NFE children in this division is slightly inferior to those of the formal schools.

It may, however, be pointed out that in absolute sense the achievements of neither of the two sets of children is satisfactory.

At level II i.e. equivalent to class V of the formal system, the position is as under:

In Kashmir Division, 16.7% NFE children pass in language, 12.2% in social studies, 15.61% in General science, 16.2% in Mathematics. Cumulatively 17.8% NFE children pass the tests of level II. Of the formal school children, 8.8% pass language, 25.8% pass social studies, 9.0% pass general science, 9.6% pass Mathematics while cumulatively 13.3% pass the same test as was administered to NFE children.

In Jammu Division, at level II, the position is as follows:

Out of the two blocks only one NFE centre in one block had children at level II. The subjectwise pass percentage in NFE was 1.6% in language, 15.2% in social studies, 12.8% in general science, 4.8% in Mathematics and cumulatively 8.6% have passed. The pass percentage in the formal school of the same block is 10.2 in language, 21.6 in Social Studies, 14.8 in General Science, 8.8 in Mathematics and 13.3 cumulative.

Orissa: In Orissa, 609 NFE children took tests from 39 centres; 353 were at level I, 250 at level II and 6 at level III.

In language, 107 have secured above 60% marks at level I. The exact figures about those securing between 40-60% marks and those below 40% is not available.

Thus about 30.5% have secured above 60% marks. In the formal schools, 24.2% have obtained between 40 and 60 per cent marks while 69.8% children have secured less than 40% marks. In environmental studies the children of NFE system have scored as under:

58.6% children have secured above 60%, about 11.5% have secured between 40 to 60%, and remaining 29.9% have secured beelow 40%. In the formal system, 37.93% children secure above 60 percent marks, 24.13% between forty to sixty and 37.93% below 40%. In Mathematics, the NFE learners scoring pattern emerges as 64% scoring above sixty percent marks, 12.2% between forty and sixty and 23.89% below forty. The formal schools' children scoring pattern in Mathematics is: 51.7% score above sixty percent, 6.9% score between forty to sixty and 41.4% score below forty. Cumulative figures are not available for Orissa.

At level II, in language, 34.5% NFE children scored above 60 percent marks, 25.3% scored between forty and sixty while 40.2% secured less than forty. In the formal schools the percentage of children scoring above sixty was nil, 24% could secure between forty and sixty while remaining 76% secured less than forty. In social science 62.4% NFE children score above sixty, 20.8% between forty and sixty and 16.8% below forty percent marks. The picture in the formal schools, in this subject is that 32.0% children secure sixty percent or above, 16.0% secure

between forty to sixty while 52.0% secured less than forty percent. In General science at this level the NFE children's achievement show that 67.2% achieve more than sixty percent marks, while 16.4% each secure between forty and sixty and less than forty percent. In the formal schools the children's achievement at this level shows that 36% children secure more than sixty percent, 40% secure between forty and sixty while 24% secure less than forty percent. In Mathematics, the picture regarding NFE was 32.4% secured above 60%, 25.2 secured between 40 to 60% and 42.4% below 40% marks. In the formal schools no child could secure 60% or above, only 4% could secure between forty and sixty while remaining 96% could not secure even forty percent.

At level II the cumulative score data is not available.

Under the formal curriculum model, Orissa has NFE at the middle level viz. level III. Let us have a look at it also.

Only six children in NFE at level III were administered the test. 16.25% scored 60% and above, 67.50% scored between 40 to 60 percent, and 16.25% scored less than forty percent in language. In Maths 32.50% secured more than sixty percent, 48.15% secured between 40 to 60 percent, and 16.15% less than forty percent. In social studies all have secured more than sixty percent. Same is the case with General Science. In English 83.75% secured

between 40 to 60 percent whereas 16.25% were below 40.

These tests could not be administered to middle school children (formal schools) and hence comparison at this level is not possible. However, even in absolute terms the performance is fairly good.

We may, in retrospect, say that formal and non-formal systems are almost equal in terms of the achievement of children through the respective systems. But if we consider the input, both in terms of finances and also in terms of man-power and academic preparation, it would be a fair conclusion, even though a restrained one that NFE is making its impact on the educational scene.

Condensed Model

We shall consider the four states under this model, namely, Assam, Bihar, Madhya Pradesh and Uttar Pradesh.

Assam

In Assam, academic achievement of 556 NFE learners was assessed and 161 formal school children were also administered the same tests for the sake of comparison.

The performance of these learners at levels I and II have been categorised as follows: (Maximum marks 25)

Score range		
0-5	Very poor	Below average
6-10	Poor	
11-15	Average	
16-20	Good	Average and above average
21-25	Excellent	

At level I, in language, 39.4% boys score average and above average while 42% girls score the same. At level II, the performance of boys and girls are similar. In absolute terms, the achievement in language is not satisfactory because at level II, only 28% could score average or above marks. At level I, in Mathematics, boys and girls perform equally well, about 80% of them getting average or above average marks, while at level II 39.7% girls and 48% boys secure average or above average marks. In Environmental studies, at leevel I, 63% boys and 51.6% girls scored average or above average marks. Similarly at level II, in Social studies 62.2% boys and 59.5% girls secure that score while in General Science they are 60.2% and 55.5% respectively.

Comparing the performances of SC/ST and others, the mean scores (out of 25 maximum possible score) of SC/ST and others are : language- level I, 10.8 and 10.1 respectively, level II 5.8 and 8.8 respectively. Mathematics level I 14.0 and 14.0 respectively; level II 8.0 and 10.3 respectively; EVS - level II 10.9 and 11.1 respectively, social studies level II- 9.5 and 11.7 respectively and General Science level II-7.8 and 12.1 respectively. The conclusions are that at level I there is no significant variation in mean scores of SC/ST and others whereas level II, there is some slight difference in achievement in favour of others. Cumulatively, the performance of boys and girls are similar at both the level.

Comparing the performance of NFE children vis-a-vis formal school children it is noticed that the mean score in NFE and FE in each subject area in terms of boys and girls are as follows respectively: Level I - language - boys 9.5 and 10.6, girls 11.4 and 8.3; Mathematics - boys 14.1 and 16.3; girls 12.9 and 13.5; EVS - boys 11.4 and 10.5, girls 10.6 and 9.5; Level II - language: boys 6.9 and 6.6., girls 7.8 and 6.5; Mathematics: boys 9.0 and 11.7, girls 9.3 and 12.4; Social Studies : boys 10.7 and 10.7, girls 10.5 and 13.9; General Science: boys 10.9 and 12.5 and girls 9.5 and 13.2. Cumulatively the performance of NFE children indicates that in spite of much higher input in terms of resources, time and energy, pupils of formal education have shown only slightly better performance than NFE learners. Or in other words the NFE's achievement is much more than the efforts and resources put into it.

Bihar

In Bihar at level 1, the score pattern in language indicated that among SC/ST boys 38.65% scored less than 33%, 28.64 scored between 33 and 50 percent, 25.94% scored between 50 and 67 percent and 6.48% scored between 67 and 84 percent. Among the girls of SC/ST category, the distribution pattern was: 44.32% below 33 percent marks, 31.89% between 33 to 50 percent, 16.75% between 50 to 67 percent and 7.82% between 67 and 84 percent. The score of boys of other communities presented a picture as follows: 20.06 secured lesss than 33 percent marks, 42.80% secured between 33 to 50 percent,

29.57% secured between 50 to 67 and 1.70% secured between 67 to 84 percent. The situation with the girls of other categories was 39.56% less than 33 percent, 40.51% between 33 to 50 percent, 18.57% between 50 to 67 percent and 1.21% between 67 to 84 percent. In the formal schools, the pattern that emerged was like this: among SC/ST boys in formal schools, 79.4% students secured less than 33 percent marks, 12.8% secured between 33 to 50 and 7.6% secured between 50 to 67 percent, while all the girls of SC/ST communities obtained less than 33 percent marks. Among boys of communities other than SC/ST, as many as 60% obtained less than 33 percent, 15.7% obtained between 33 to 50 percent while 26.3% obtained between 50 to 67 percent. The girls of other communities were distributed as 80% obtaining less than 33 percent and 20% obtaining between 33 to 50 percent.

In Mathematics, 22.27% boys of SC/ST category obtained less than 33 percent marks, 21.73% obtained between 33 to 50 percent maks, 22.82% between 50 to 67 percent marks and 33.15% between 67 to 84 percent marks. Among SC/ST girls, 23.78% secured less than 33 percent marks, 15.13% secured between 33 to 50 percent marks, 13.45% secured between 50 to 67 percent marks and 41.62% secured between 67 to 84 percent marks. Among the boys of other categories the percent distribution was as follows: 20.65 below 33 percent, 26.07 between 33 to 50 percent, 26.45 between 50 to 67 percent and 26.84 between 67 to 84 percent. Among girls of other communities it was 17.80 below 33 percent, 16.30 between 33 to 50 percent, 23.44 between 50 to 67 percent and 42.30 between

67 to 84 percent. Comparing this with achievement pattern in the formal schools it was found that 33.3% SC/ST boys secured less than 33 percent marks, 38.4 secured between 33 to 50 percent, 12.8 secured between 50 to 67, while 15.3 secured between 67 to 84. The SC/ST girls had more sordied picture as many as 60% could not secure even 33 percent, while remaining 40% were distributed between 33 to 50 percent range. Among boys of other communities, 35% were able to score less than 33 percent, 15% scored between 33 to 50 percent, 37.5% scored between 50 to 67 percent and 12.5% scored between 67 to 84 percent. 80% girls of this group got less than 33 percent while 20% got between 33 to 50 percent. Thus in Mathematics too, at level I, the picture is not encouraging in either of the two sysstem, though comparatively speaking NFE children have shown better performance than their counterparts in the formal system.

In Environmental Studies, 14.12% SC/ST boys secure less than 33 percent, 23.36 between 33 to 50 percent, 36.95 between 50 to 67 percent and 25.54 between 67 to 84 percent. The girls of SC/ST are distributed as follows: 23.2% obtaining less than 33 percent, 22.1% obtaining between 33 to 50, 29.1% obtaining 50 to 67 and 25.4% obtaining between 67 to 84. The boys of other communities present somewhat better picture as 11.28% are below 33 percent, 27.62% are between 33 to 50, 47.08% are between 50 to 67 and 14% are between 67 to 84. The case of the girls of other communities is also better than their SC/ST counterparts as 18% are below 33 percent marks, 30.7% are between 33 and 50, 34.8% are between 50 and 67, and 17.1% are between 67 and 84.

Comparing this picture with the performance of children of the formal schools in environmental studies we find that 29.4% SC/ST boys could not secure 33 percent, 42.1% could secure between 33 and 50, and 18.4% secured between 50 and 67. Among SC/ST girls, 50% secured less than 33 percent, 40% were in the range of 33 to 50 percent and 10% were in 50 to 67 percent. The boys of other communities achieved as follows: 30% secured less than 33 percent, 17.5% secured between 33 and 50, 47.5% secured between 50 and 67 and 5% secured between 67 and 84. 60% girls of other communities scored less than 33 and 40% scored between 33 and 50.

The cumulative performance of the NFE children at the level II was as under:

5.67% SC/ST boys out of a total of all children i.e. 2783 secure less than 33%, 12.15% SC/ST boys secure between 33 and 67%, 76.62 between 5.46% SC/ST boys secure between 67 and 84%. Similarly among SC/ST girls the spread is 6.46% of them secure less than 33%, 9.87% are in the range of 33 to 67 percent and 4.49% are in 67 to 84% range. 5.96% boys of other communities secure less than 33%, 20.68% are in the range of 33 to 67%, and 4.78% are in range of 67 to 84 percent. 5.60% girls of other communies secure less than 33%; 12.93% secure between 33 and 67 percent, and 4.60% secure between 67 and 84 percent.

Compare this with the performance of children in the formal system. Out of a total of 322 children, 18.32% boys belonging to SC/ST scored less than 33%; 20.50% scored between 33 and 67, 2.48% scored between 67 and 84%. Similarly 7.14% SC/ST girls could not score more than 33% while only 4.34% could secure between 33 and 67%, and none could secure above

67%. Among boys of other communities the position was: 18.94% could not secure more than 33%, 18.94% could secure between 33 andd 67% and only 3.42% could secure more than 67%. The girls of other communities were distributed as follows: 4.34% were below 33% score mark; 1.55% were between 33 and 67% and none could secure more than 67%. The conclusions are obvious.

At the middle level, the tests were administered to 40 children in NFE system, all of them belonged to 'other communities'. In Hindi, 25% boys (out of the 40 boys and girls) could not secure even 33%, 10% were placed between 33 and 67, none could secure more than 67%. Similarly as many as 60% of learners - female - could not achieve 33%, only 5% could achieve between 33 and 67% and none could achieve more than 67. Comparing this with the achievement of children in the formal system it is found that in Hindi, 37.5% boys could not achieve even 33% marks, 25% could secure between 33 and 67% while 20% could get between 67 and 84%. 12.5% girls could not secure 33%, 2.5% could secure between 33 and 67% while another 2.5% could secure between 67 and 84%.

In Mathematics, 33.5% boys in NFE were below 33% mark, 2.5% was between 33 and 67%, none was above 67%, while all girls i.e. 65% were below 33% marks. In the formal system 40% boys were below 33% marks, 30% were between 33 and 67% more, 12.5% were between 67 and 84%, 10% girls were below 33% marks, 7.5% were between 33 and 67% while none could achieve more than this.

In Environmental Studies, 20% boys could not achieve 33% marks, 10% were between 33 and 67%, 5% were between 67 and 84%, 42.5% girls could not secure 33%, 22.5% obtained between 33 and 67%, while none could get more than this. In the formal system, 35% boys could not secure 33% marks, 35% were between 33 to 67 percent, 12.5% were between 67 and 84 percent; 10% girls could not secure 33%, 7.5% were between 33 and 67 percent and none could get more than this.

In General Science, 7.5% boys in NFE system could not secure 33 percent, 27.5% were between 33 and 67, none above it. 25% girls were below 33%, 40% were between 33 and 67. None above it. In the formal system, 15% boys could not achieve 33%, 55% were between 33 and 67, 12.5% were between 67 and 84. 12.5% girls could not secure 33%, none was between 33 and 67 but 5% were above 84% marks.

Cumulatively at level II in the NFE system, 21.25% boys secured less than 33, 12.5% were between 33 and 67, 1.25% between 67 and 84; 48.13% girls were below 33% marks and 16.88% were between 33 and 67 while none was above 67 percent. In the formal system, 31.88% boys were below 33%, 36.25% were between 33 and 67, 14.38% were below 33 percent, 2.5% were between 33 and 67 and 1.88% bettween 67 and 84. So the situation in either of the two systems is not encouraging.

Madhya Pradesh

At level I in language achievement out of 416 NFE children in government run centres, 190 children are below average i.e. less than 10 marks, while remaining 226 i.e.

54.33% are average and above average. While among the Formal School children 11 out of 44 children i.e. 25% are average and above average. Similarly, in EVS 304 i.e. 73.1% children are average or above average in NFE centres, while 22 i.e. 50% are average or above average in formal schools. In Mathematics 361 i.e. 86.78% children in NFE Centres are average or above average while in the formal school 128 i.e. 63.64% are average or above average.

At level II, in language, 102 children out of 180 i.e. 56.67% are average or above average in NFE centres as compared to 65 out of 87 i.e. 74.71% are average or above average in he formal schools. Similarly, in Social Studies, 149 i.e. 82.78% are average or anove in NFE centres compared to 18 out of 28 i.e. 64.29% in the formal schools. In Mathematics 130 i.e. 72.22% in NFE centres are average or above while 10 children out of 28 i.e. 35.71% are so in Formal schools. In General Science the number of children who are average and above is 152 forming a 84.44%, in the NFE centres, while in the formal schools 22 children are in this category comprising 78.57%.

At level III, in first language, 59.18% NFE children score above average, while 36% are score in the formal system. In English the 68.37% NFE children score above average as compared to 30% in the formal system. In Sanskrit, 53.06% score above average in NFE system as compared to 40% of the formal system. In Social Studies, 78.57% NFE children score above average while 74.0% formal school children score above average. In Mathematics 77.55% NFE children score above

average marks in as compared to 30% children of the formal system. Similarly in General Science, 84.69% NFE children score above average as compared to 60% of the formal system.

Uttar Pradesh

Level I learners who had completed about one year of schooling at the NFE centre, as in case of other states, constituted level I of the primary stage. The mean score obtained by children of NFE and the formal system is equal in language (i.e. 11.00 by each group); higher in Mathematics by NFE group i.e. 16.36 against 14.40 of formal school children and 14.11 of NFE children against 11.11 of formal school children in Environmental Studies. This shows that at this level the children of NFE are doing better than their couterparts in formal schools.

At level II, the mean score of NFE children and formal school children respectively were: language 12.46 and 15.30; Mathematics 13.30 and 15.30; Social Studies 14.87 and 16.00 and General Science 15.68 and 15.00. It would be seen that formal system has greater achievement as compared to NFE system at this level.

At level III (Middle level), the mean scores of the two groups of children viz. NFE children and formal school children respectively gives us the following picture: Language 16.45 and 16.20, Mathematics 16.60 and 16.85, Social Studies 14.86 and 16.05, General Science 15.50 and 14.20. English 16.16 and 13.95, Sanskrit 7.40 and 6.65. No clear inferences can be drawn at this level.

Partely Integrated Model

Under this model, there are two states, namely, Andhra Praddesh and West Bengal.

Andhra Pradesh:

The comparative picture of the achievement of NFE children and children in the formal schools is follows:

In Koyyalagudem Block of West Godawari District, the mean performance of boys in NFE is higher than their counterparts in formal schools; similar is the situation with girls. In Nallajerala Block the boys and girls of formal school perform better than those of NFE centres. But in absolute terms, the performance of NFE children is almost similar to that of the children of formal school, because mean scores are very close to each other.

In Adilabad district in Nirmal Block, the achievement of NFE children is far superior to their counterparts in the formal school. Same is the situation in Utnoor Block of the same district.

In the district of Chittoor, in Pullichera Block (selected for study of NFE run by non-governmental organisation) it is revealed that the achievement of both boys and girls is far superior to their counterparts in the formal schools.

If achievement of children in the tests are any indicator it can easily be concluded that NFE is achieving greater success with its limited resources, at the primary level and it may be an eye opener to educational planners and set them thinking on providing greater impetus and incentive to this programme for expansion in rélation to formal structure.

West Bengal:

The scholastic achievement of the NFE and formal education (FE) has been compared in this state too. At level I, the age range of NFE children is 9-13 years, while of FE it is 6-8 years. The former group is more mature but heterogeneous, while the latter is relatively young and homogeneous. In Bengali language, within the NFE group, the achievement of other castes is slightly higher in comparision to SC/ST children. The NFE children show much poorer achievement than their counterpart of FE. The mean and standard deviation (SD) of NFE group is 9.9 and 5.10 respectively whereas those of FE are 16.78 and 6.59 respectively. In Mathematics, NFE children show a mean score of 13.3 with a standard deviation of 6.4 in comparison to mean and standard deviation of 19.26 and 5.51 of formal school children. In Environmental Studies the formal school children show much higher achievement with mean and SD of 18.06 and 4.84 respectively compared to 11.60 and 6.12 of NFE learners. In all the three subjects the formal school children show higher achievement than NFE. Comparing with the foregoing picture in other states, West Bengal falls out of the pattern leading to questions about the efficacy of NFE programme.

At level II, the age range of NFE learners was found to be 10-20 while that of the FE learners was 8-11 years. The latter being homogeneous and the former being haterogeneous, the achievement level is bound to be affected. Also it raises question about the very basic question of NFE for out of school children where the upper age limit is 14 years. The population of 15 and above age range should have been covered under Adult Education Programme.

Given this background, we observe that in Bengali language the FE children show higher achievement of mean score 16.35 and SD of 5.68 in comparison to NFE learner's 8.17 and 5.46 respectively. In Mathematics too the pattern is the same, with FE learners having a mean score of 19.26 with a SD of 5.5 as compared to the mean of 10.86 and SD of 5.05 of NFE learners. In Social Studies, however, the two groups are comparable, and their achievement does not show much difference. Same is the case with General Science.

It may be seen that West Bengal strikes a different note than Andhra Pradesh, both being in the same pattern of partly integrated curriculum model. However, as pointed out earlier there is an indicator pointing towards the implementation of the scheme in West Bengal which allows learners of even 20 years age to be enrolled under this programme and that too at the stage of level II.

Integrated Model

Rajasthan

The performance of children has been categorised as below average and above average i.e. those scoring less than 40% are below average while those above 40% are above average marks.

In Hindi, at level I in NFE 36.05% children score below average and 63.95% score above average marks. In Mathematics, 17% children score below average while 83% scored above average. In the formal schools in Hindi 39%

children score below average while 61% scored above average, in Mathematics 32% scored below average and 68% scored above average. As this is an integrated system, at level III, there is no subject like Environmental Studies.

At level II, 61% children of NFE system scored above average in Hindi while 39% scored below average. In Mathematics 64% scored above average while 36% scored below average. In Environmental Studies 85% children scored above average and only 15% scored below average. In Natural Science the pattern was similar i.e. 85% above average and 15% below it. Against this, 59% children of formal school scored above average in Hindi while remaining 41% were below it. In Mathematics, 62% children of this system scored above average and 38% below it. In Environmental Studies, 59% formal school children scored above average while 41% below it. In Natural Science, 85% of the formal school children scored above average and 15% of them below it.

It would be seen that the performance of children in NFE system as compared to that of those in the formal system is many a times superior. It may, however, be inferred that in absolute terms, both the systems have not been able to deliver the goods at expected level and there is scope for improvement in both. But this can be said, with fairness, that given the input and infrastructure, the NFE has as compared to formal system, it has been more effective in terms cost benefit analysis.

CHAPTER - VII

THE NFE AND ITS CONSUMERS

The scheme of NFE needs to be assessed from the point of view of its consumers - the learners, the parents and the employers of the children. We shall examine the scheme, once again, based on the curricular models, from their points of view. The learners are those who have had attended NFE centres at some point of time.

FORMAL MODEL

In J&K, there were 65.3% learners who were below 11 years of age, the rest 34.7% were above 11 years; 53.5% were male, 46.5% female, none was a scheduled caste or tribe, and 5.25% were such who attended the centre for less than a year while 94.75% attended for more than one year. All of these have joined the centre to get educated, have expressed a liking for the centre; they like the fellow learners; 37.2% consider that education at NFE centres will improve their capacity to do their household work more efficiently while 67.8% feel it would make them vocationally more efficient. About 2.6% say it would help them to keep better account, while 1.3% have given different reasons. As many as 73% have reported that they have no difficulty in following instructions in the NFE centres, 6.4% have difficulty in reading and writing. 22.6% have difficulty in Mathematics, 2.6% have difficulty in language. All of them want to continue in the centre. About 80% wish to join the formal school after finishing at NFE Centre, 14.1% wish to takee up some craft work, 5.2% wish to continue in NFE Centres. About 55% like their fellow learners most; about

59% like best their teacher, 25% like best the things they have learnt. 92.56% acknowledge that they have learnt the language in these centres, 30.7% said they learnt calculation, 94.8% say they have learrnt to read and write. Their expectations from the NFE centre ranges as follows: about 10% want to have more effective programmes of reading, about 29% want it to impart instructions in all the subjects and manner it is done in formal schools, about 31% want to have games and sports programmes in NFE Centres.

In Orissa, 28.21% learner respondents were scheduled caste/scheduled tribes boys under the age of 11 years who had studied at a NFE centre for more than a year, 5.13% were above 11 years of age. 35.90% belonged to other class boys and were below 11 years having studied for more than one year, 5.13% were above 11 years. Among girls, 3.85% were below 11 years and were SC/ST having studied for more than a year, 2.56% were above 11 years, 24.36% belonged to other classes and were more than 11 years while 5.13% were more than 11 years of age. All of these respondents (total 78 in number) reported that they want to go NFE centres to learn reading and writing. Again all of them have been reported to have liked the centre and also liked their fellow learners.

79.48% of the respondents have reported that their learning at NFE centres has helped them in their day to day household work, 38.46% reported that their education at NFE centre has helped them in assisting their parents in their vocations.

All of them have expressed a desire to continue their studies in formal schools after passing from the NFE centres. These learners want their NFE centres (perhaps because the instructions and the materials are the same as in formal schools) should provide mid-day meal, (the classes are held in the evening!) dress and writing materials, good education and vocational training. Cultural activities and entertainment programmes are also the desirables!

As many as 78 parents were interviewed, of which 25.64% were SC/ST and the remaining other class parents. While all SC/ST parents were males, 3.44% of the remaining were females. 15.38% of all the parent-respondents were illiterate and the age range varied from 28 to 60. Their main vocations were agriculture, cattle rearing, daily wage workers, food gathering from the forests. Very few have regular service or cottage industry as source of livelihood.

The main motivation for sending children to NFE centre was the persuation by the Instructor of the centre (53.85%); 21.79% sent them to NFE centres because it was nearby, 24.36% were so much self-motivated to send their children to any educational institution and NFE centres came in handy. All of them have noticed behavioural changes in their children since joining the NFE centres, particularly adoption of hygienic habits. They also reported that their children could now read and write. 10.26% feel that their children could now keep account, 14.10% say they can write letters, 74.36% say they can help their siblings to read and write, 1.28% say he can 'improve the home', all of them say that manners etc. have improved

and their social behaviour has also improved. Again, all of them chose NFE centres for the education of their children "out of necessity and not by choice" in Orissa, primarily because the NFE centres are nearer their homes than the formal schools.

Of the majority of the employers interviewed 75% were agriculturists while 25% were in business and the children were employed in these activities. 50% of the employed children are tending cattle, 25% graze the cattle of agriculturist employer and 25% work as domestic servant. The work habits have improved (regularity 50%), 25% have acquired more knowledge about agriculture and 25% know more about business - accounting etc. The learner employees have positive attitude towards their employers, have become more polite, have cordial relations with fellow workers. Employer feels that the learners should get more vocational training to improve their work in which they are presently engaged.

CONDENSED MODEL

In Assam, the study reveals the views of the learners and the parents. Most of the learners interviewed had their education at NFE centres for 1-2 years and they were motivated to attend centres to acquire knowledge through education and all of them liked the centres and class-mates. This view is corroborated by high percentage of attendance recorded in Attendance Registers of the centres.

Education, the pupils received, was stated to be useful in day-to-day household work (80%); in dealing with people (55%), in assisting parents in vocation (28%).

Most of them expressed that they find difficulties in learning Arithematic. But the study shows that pupil's performance in language is generally poor. Most of the learners wanted to continue their education at NFE centres and would go for further education (88%) and others would do other job after completion of NFE.

78% learners liked their fellow learners and 55% teachers also. All of them are said to have learnt to read and write and calcuate at the centres. All learners expressed that they wanted scope for games and sports, songs and music which their nature demands but all NFE centres lacked these facilities. Co-curricular activities are seldom organised at NFE Centres.

Parents' views:

a) Motivation: Most of the parents were motivated to send their children to NFE centres by the Instructors concerned and it is found that major initiative in setting up centres is taken by them. B.D.O. and other social workers are also found to be motivating parents and a few parents spoke of self-motivation.

b) Change in behaviour patterns of NFE Pupils: All parents indicated that their children had displayed definite change in behaviour patterns for the better in respect of health habits; sharing home responsibilities; participating in family decision making and can read and write to some extent.

c) Suggestion for improvement of NFE Centres: All parents want that NFE centres should continue to impart education. The centres should have better facilities in terms of equipments, games and sport, co-curricular activities. Some

parents pleaded for meals and dress to be supplied to their children.

The sample NFE centres under study, had no pupils sent by any amployer and hence employers' views could not be obtained for recording.

Bihar:

In Bihar 80 learners were interviewed - two from each centre selected for the study. There were 57.5% boys and 42.5% girls. 28.75% of total were boys and 27.5% were girls belonging to SC/ST. 17.5% boys and 6.25% girls belonging to SC/ST were in the less than 11 years. 11.25% boys and 21.25% girls were above 11 years. These SC/ST learners were attending the NFE centre for more than one year. The learners belonging to other castes were 43.75%, 28.75% boys and 15.0% girls. 11.25% boys and 6.25% girls were above 11 years and 17.5% boys and 8.75% girls were below 11 years. 23.75% boys and 11.25% girls were attending the NFE centre for more than 1 year. 5% boys and 3.75% girls were learners in the NFE centre for less than one year.

Learners were mostly motivated by the Instructors of the NFE centre. In some cases the Mukhiya of the Gram Panchayat, B.D.O., Pramukh and Supervisors also motivated the learners to come to the NFE centres to study. All the learners liked to attend the centre and were happy to be with the fellow learners. They were fond of their Instructor and learnt many good things from him. It appeared that the behaviour and outlook of the learners have improved to a considerable extent.

They helped their guardians in their household work in a better way, they learnt to show respect to their superiors, paid attention to personal hygiene and developed good habits. Free from the strict formalities of traditional schools, the NFE centres create a very congenial atmosphere where the learners develop healthy attitudes and a sense of belongingness to the centre.

Most of the learners belong to poor families. They aspire for better socio-economic condition. They went to be better managers of farms, shops and other family vocations to augment the income of the family and live a better life.

Altogether 80 parents, two from each centre were interviewed in Bihar. Of them 96.25% were males and 3.75% females. The parents belonging to SC/ST were 46.25% and others 53.75%. Amongst them 81.25% parents were literate (37.5% SC/ST and 43.75% others). Of the illiterate parents 8.75% belonged to SC/ST and 10.0% to other castes. Generally the parents were above 45 in age. Their maximum age noted was 72 and minimum 30.

Majority of parents, (80%) were engaged in agriculture. A few of them were labourers (11.25%), businessmen (3.75%) and were in Government Service (3.75%). 3.75% parents were well to do, 27.5% were having average income, and the bulk i.e. 68.75% were poor.

Most of the parents i.e. 91.25% were motivated to send their children to NFE centre by the Instructors. The rests were convinced by other agencies like B.D.O./Pramukh and Block Education Extension Officers. The parents seemed to be satisfied

over the progress their children were making in NFE centres, particularly in terms of literacy, clean health habits and social behaviour.

87.5% parents admitted that their wards could read and write. 16.25% parents reported that their wards could write letters. 31.75% parents reported that their wards could keep accounts. 37.5% parents said that their wards helped their brothers and sisters to read and write. 48.75% parents reported that their wards shared home responsibilities. 42.5% parents responded that the behaviour of their wards with their peer group had remarkably improved. 40% parents said that their wards' behaviour with elders and neighbours became courteous and polite. 15% parents said that their wards behaved nicely with visitors. 72.5% parents said that their wards never attended formal schools and 27.5% parents said that their wards were formerly students of formal primary school but left the formal schools before completion of the course because of unkind treatment of the teachers.

Two employers from Chainpur block, 1 from Kanke Block and 1 from Rajgir block were interviewed. In Ekangarsarai block, in spite of sincere efforts by instructors and supervisor no employer could be available as the learners being children of cultivators, were engaged in their parents family occupation and were not employed by any other. Three employers belonged to scheduled caste of whom two were cultivators and one was a businessman. One employer belonged to other caste and he was a businessman.

Of the four learner employees, two were employed in agriculture and its allied work. Both of them grazed cattle and did odd jobs during harvesting season. One learner employee was engaged as salesman in a shop, the other served in the tea staff of his employer. Of the two learner employees engaged in agriculture work. One has been working for 5 years and the other for two years. Of the other two serving in shops, one is working for more than 1 year and the other for less than 1 year.

Marked improvement was found by the employers in cases of three learner employees belonging to scheduled caste. They are now more faithful, respectful towards their employer. The learner employee working in a tea stall has acquired better understanding in dealing with customers. No improvement was noticed by the employer in the case of the learner employee employed as a salesman in a shop. Because each employee was a lone worker employed by the employers, his behaviour with his co-workers could not be observed.

The businessman employer suggested that the learners should learn accounts work in a non-formal education centre. The other three employers were of opinion that the learners should acquire better skill in reading and writing and their behaviour requires more improvement.

Madhya Pradesh:

In Madhya Pradesh, 92 learners were interviewed. All of them were studying for more than one year. 63.04% were boys and 36.96% girls. 45.65% learners are SC/ST. 31.52% are

under 11 years. All the respondents say that they joined NFE centres to learn reading and writing. 56.52% have expressed their liking for the NFE centre. 44.57% think that after studying in NFE centre, they can assist their parents in a better way. Again 78.26% feel that education would help them in day-to-day household work, 5.43% feel education helps them to deal with people in a better manner. 67.39% respondents like the teacher, 54.34% like the things they learn, 32.61% like the fellow learners. 57.61% wish to continue studies further, 30.43% want to go for service, 6.52% want to join parental vocation, 2.17% wish to do tailoring which they have learnt in NFE centres' 'Earn and Learn Scheme', 3.26% wish to do business. Among the things they want to learn more at the NFE centres the pattern of response is: making tatpatti (mats) - 14.13%, sewing work - 28.26% making toys - 4.34%, sports - 17.39% and NCC - 1.09%.

Among the 92 parents interviewed 65.22% belong to SC/ST communities. 34.78% were illiterate, 4.34% were graduate including 1.09% women, 8.69% were matriculates, 11.96% were middle and 35.87% were primary pass (Class V). Of these respondents, 7.61% were females, 64.13% were farmers, 14.13% were in-service, 11.96% were labourers, 6.52% were artisans, 3.26% were in business.

As many as 90.22% parents say that they were motivated to send their children to NFE centres by the instructors, 3.26% have acredited a fellow learner for motivation, while 6.52% have given various sundry motivating factors. The behavioural changes in the learners were noticed by the parents

such as washing hand before meals was reported by 88.04% parents, washing clothes and daily bathing by 65.22% parents, brushing of teeth daily 80.43%, and 65.22% report that the learners now take food neatly. Again 58.70% parents say that their children can now keep accounts, 65.22% said that now they can write letters, nd 35.87% say that they can now represent the family. However, it may be noted that none of them have reported that they help their brothers and sisters with their studies. 88.04% parents have reported marked change in behaviour towards peer group, 78.26% report that they behave better, with neighbours, 4.35% report that learners behaviour is more polite to visitors. The children of 18.48% parents had earlier studied in a formal school but left the same due to poverty.

As many as 81.52% parents feel that honorarium paid to instructors is highly inadequate. 73.91% suggest introduction of mid-day meal to learners, 63.04% want introduction of games in NFE centre and 84.78% want more and better teaching facilities/aids.

Only eight employers were interviewed, six were agriculturists, one craftsman, and one govt. servant (postman). Of the eight learners who were employed, seven belonged to SC/ST. Five are engaged in Agriculture and three in household work. Two learner-employees were reported to have more knowledge about the job, five were more regular, five were now more efficient, three worked with greater interest, two shared responsibility with their employers; two had more positive attitude towards employer, four shared common interest with the employers, two discussed their problems with them, two readily

accepted the suggestion now, five employers report that their behaviour is polite with co-workers.

The suggestions put forward by employers for improvement in NFE range from greater vocationalisation (5), and incentive to learners (4).

In Uttar Pradesh, a total of 118 learners were interviewed - 57.63% were boys and 42.37% were girls. 6.78% belonged to SC/ST. 35.59% were below 11 years and 64.41% above 11 years. 92.37% were such who were studying for more than one year and 7.63% were studying for less than a year.

77.5% of respondents came to the NFE centres to be educated; 0.8% to be able to get employment, 3.3% because parents wanted them to join, 18.4% did not respond. According to the learners, they consider that education at NFE centre helps them most in performing better the day-to-day household work, it also helps them in assisting their parents in their work while it lightly helps them in dealing with people. Almost all have said that they do not feel any difficulty in the subjects taught and that they want continue their studies. The pattern of response as to the aim after completing courses at NFE centre, 68% want to gain more knowledge about Agriculture, History, Geography, Science etc. 12% want to seek self-employment, 9% want to look after the family and make it modern, 5% want to take part in games and sports, 4% want to follow improved method of agriculture and 2% want to seek employment.

The NFE has provided them the skill of reading and writing (86%), calculation (65%), making toys (27%), playing different games (21%). It is noteworthy that basic educational

skills have been achieved by most of them.

The learners expect that NFE should be able to provide them some skill or knowledge of craft e.g. tailoring, doll or toy making etc., cultural activities, music, more agricultural skills etc.. As it is, it is same in content as formal education.

At the middle stage, in Uttar Pradesh, 16 learners were interviewed, 81.25% being boys while 18.75% were girls. 12.5% belong to SC/ST. About 33% indicated that they joined the NFE centre in order to take public examination of junior High School (middle level). 25% said that they came to NFE centre because they could not go to a formal school. All the respondents liked the centre and fellow learners. 66% say that education in NFE centre helped them in their household work. About 55% said that it enabled them to assist their parents in their vocation. However, not many learners said that education helped them to deal with people, may be because the content is largely formal and does not have applied aspect. Most of there learners did not feel any difficulty in subjects except science and mathematics which is found to be difficult by 33% learners. The order of priority with regard to future plans, in that order, are joining high school classes, doing one's own business, helping in parental occupation and improving agriculture. The goal is more concretely set at this level. General suggestion about improvement in NFE programme is that at this level, the time for subject teaching is too short and should be increased, good language teaching (including English) programme should be made available to NFE system, some vocational training should

be given, improved science teaching with practicals be given, and teaching of improved methods of agriculture should be part of NFE.

In order to gauge the impact of NFE programme, a total of 117 parents were interviewed, 42.74% being literate and 57.26% illiterate. Only 1.71% were female parents for obvious social reasons that females generally do not talk to outsiders. In most of the cases the motivator was the instructor and in few cases the 'other learners'. Of course the social worker, centre itself and Gram Pradhan also find a place in the list of motivators identified by the parent - respondents but they are very remotely identified showing the public participation in the programme leaves much to be desired. Gram Pradhan's involvement is essential in the programme.

Some behavioural changes have been noticed by the parents among their learner - children in the system as a whole. While literate parents have reported the following behaviours in order of priority - cleaning of teeth daily, bathing everyday, washing of hands before meals, taking of food neatly; the illiterate parents too report same behavioural changes though in slightly different order, namely, washing of hands before meals, bathing everyday , cleaning of teeth daily and taking of food neatly. This perhaps indicates the emphasis of the two groups on different behavioural aspects. All the learners can now read and write as reported by almost all the parents. The literate parents find the following attributes in their wards in order of priority can represent the family outside, writing

letters, helping brothers and sisters to read and write, keeping accounts, sharing home responsibility; but for the illiterate parents the priority is - writing letters, keeping accounts, helping brothers and sisters with their studies, sharing home responsibility, representing the family outside. This is significant as it reflects the needs of the parents.

The employers in the sample are distributed among the following trade/vocation - Tailor (20%), Weaving (40%), Mantha Plantation (20%), bank employee (20%). A word about the last - he is a sweeper and asks his son to deputise for him at the bank! These learners are given work suited to their age and skill. The employer, however, have noticed that 40% of learners knew more about their job, 80% have become more regular, 80% have improved in efficiency, 100% take more interest in work, 40% share more responsibility and 40% deal with customers better. Also 80% learners have more positive attitude towards the employers, 60% share common interest with employer, 40% discuss the problem with the employers, 80% readily accept employers suggestions. They also behave gently with others and are cordial to them.

Some of the suggestions given by parents and employers are as under: facilities as those at formal school should be available at the NFE centres, training in some useful vocations is necessary (at times suggestions have come to make education less bookish and more practical),

time allotted for teaching work is too short and needs to be increased, hours for organising classes should be according to the needs of the community, some games and cultural activities should be integral part of the NFE centres, incentives like light refreshments need to be introduced, learners should be rewarded for curricular and co-curricular activities, instructor training needs to be strengthened, frequent supervision, and more intensive training in 3Rs specially mental arithmatic should be given.

Partly Integrated Model

In Andhra Pradesh, the learners interviewed were in the age range of 10 to 16 years (!) of whom 60% belonged communities. About 50% of them said they were attending centres for more than three years (!). It is, by implication, apparent that the learners have been at the centre for a duration longer than envisaged in the scheme. About 75% have indicated that they attend NFE centre to get knowledge and that it has enabled them to read and write, write letters, and calculate. All of them liked the centre and their fellow learners. As many as 95% of them have said that they assisted their parents in their daily chores and vocations, 98% have indicated that there is no difficulty in learning the subjects and 2% find difficulty in Mathematics. They all want to continue the studies in the centre. They all want to continue the studies in the centre. After completion of the course, they wish to work in Agriculture or beedi making etc. 20% want to pursue their studies

further, either in the formal schools or the higher NFE centres. In general it was reported they liked the things that they learnt at the NFE centre, some of them (less than 5%) want to study English, Burrakatha and Kolatam.

The motivating factor for the parents to send their children to NFE centre has been the instructors in 50% of the cases, 40% parents said that the establishment of the centre itself was the motivation while 6% said that other learners at the centre motivated them to send their children to the centre while 4% were various sundry reasons. 70% of them have noticed the change in habits of the learners e.g. washing their clothers and bathing everyday, 10% say hey take their food neatly, 20% parents report washing of hands by learners before taking the meals. 90% have reported that their children could read and write now while 10% say they cannot, 40% say they (the learners) can keep accounts. 25% say their children donot help their brothers and sisters with studies while 20% say they do, 15% say they are able to write letters. 65% have noticed the good behaviour of the learners with the people around in the neighbourhood while 35% report similar behaviour with the peer group.

The report with regard to observations of the employers is only impressionistic rather than data based. It has been reported that mostly the learners have been employed as cattle grazers, they are more regular and punctual, but there are two cases which have not shown any improvement in their behaviour even after attending the NFE. Normally, they are

positive in attitude to their employers, discuss the problems of work with them and are amendable to suggestions. The employers feel that there should be greater emphasis on agriculture.

In West Bengal, 80 learners were interviewed, 55.5% were boys and 44.5% girls; 42.5% were below 11 years while 57.5% were above 11 years of age. 60% were of SC/ST communities while 40% belonged to other communities. The NFE beneficiaries are, therefore, more of SC/ST communities. The single motivation for joining the NFE centres is academic achievement. There is no discrimination of motive could be identified according to caste, sex, age or period of stay. 100% of them show their liking their fellow learners without any discrimination and also the centre is liked by most of them. 36.25% report that the education they receive help them in assisting their parents in their vocations, 66.25% report that it helps in day-to-day household work and 38.75% report that it helps in dealing with people. As a secondary inference, it could be said that more life oriented programme could motivate learners to enroll and stay. 67.5% did not feel any difficulty in learning the subjects taught while 26.25% feel difficulty in arithmatic, 8.75% have difficulty in General Science. Only in exceptional cases (one each) have difficulty in social science and writing. While 50% of the learners aspire to enter into the formal system of education, 26.25% wish to continue studies, 5.00% want to enter parents vocation, 3.75% want to help the family economically, 3.75% want to enter into

business, 2.5% want to enter into farming, 1.25% want to acquire wider knowledge and 11.25% have not responded.

The learners have developed liking in the following pattern - 35% like fellow learners most, 30% like the things they learn at the centre, 67.5% like the teacher and only 17.5% like the way the teacher teaches. Thus it can be said that the learners, in general, like the teacher but not the way he teaches. This obviously underscores the need of teachers' training in special methods necessary for teaching at an NFE. The learning benefits received from the centre are as follows: 97.5% report that they have learnt to read and write, 41.25% have reported to have learnt to calculate, 1.20% have learnt to make toys, 2.12 have learnt to play different games. They expect that hey would be able to learn other school subjects (26.8%), learn vocations (8.0%), play different games and dances (16.8%), learn various crafts (17.6%), learn household work and home craft (1.6%), learn to rendeer first aid (1.6%) and learn agriculture (0.8%). It can be seen that the perception of the function of NFE centres is varied and so are the expectations.

Of parents interviewed (80 in number), 51.25% were illiterate and 48.75% literate; 92.5% were male while 7.5% were females; 37.5% were engaged as day labourers, 31% were farmers, 8.75% were in service, and small percentage of them were engaged in various other vocations (between 1.25% to 3.75% each) such as bus driving, shopkeeping, beedi making, fishing, carpentry, begging etc. etc.. Most of the parents i.e. 75.6% send two children, and very small percentage send more than two children while the model situation is family with four or

five children. The source of motivation to send the children has been mainly the NFE teacher (about 85%), social worker and other learner (about 11% each) self (7.25%) NFE centre and the local press (2.4% each).

The impact of NFE on these children have been that all parents but one reported (98.8%) that their children can read and write, 42% say that they help by sharing the responsibility at home, 27.5% say that they represent family outside, 27.5% help their siblings with their studies, 18% help in reading and writing letters, 14.5% help by keeping accounts. There have been noticeable behavioural changes in their children as a result of joining NFE centres. Approximately 55% parents report that they wash their hands before meals, about 53.6% notice cleaning of teeth daily, approx. 30% notice them bathing and washing their clothes daily, 18% say they take their meals neatly, about 7.3% notice modest behaviour in them, while smaller number of parents have noticed refinement in activities, wider reading, self-consciousness while interacting with others. The parents have suggested that NFE should improve by following activities: providing tiffin to learners (30%), provision of teaching-learning aids (30%), permanent building with sufficient accommodation (15%), provision of school uniform (12.25%) sufficient reading and writing material adequate and regular salaries to instructors, more time to be given (about 10% each), sufficient equipment and light (about 9% each), sanitary facility and drinking wter (about 5%) and smaller percentage have suggested provision of sports materials, more NFE centres and regular supervision.

Out of the eight employers interviewed majority were shopkeepers, bidi makers, teacher, while one each was agriculturist and an artisan. The distribution of employment was unspecified (50%), sales assistant in shops (about 48%) and about 12% in teading cattle. The noticeable areas of behaviour/ improvement have been, regularity (86%), more interest in work (about 78%), greater efficiency (50%). The change noticed by employers are respectful and modest behaviour (50%), accepting suggestions for modifying own behaviour (25%), taking interest in wider situations (25%), discussing problems with employers (12.5%). The employers expect that NFE should provide work education (12.5%), impart some craft training (12.5%), account keeping (25%) while 37.5% feel it should lead to general improvement.

In general it can be said that people have different perceptions of the role of NFE, that NFE has made impact to some degree, that different groups of direct and indirect beneficiaries have noticed some changes in the achievement and behaviour of the learners, to what degree is a matter that needs our consisted effort to consolidate and build upon. The important changes are primarily literacy and personal and social behaviour. The NFE centres are becoming popular. Parents and learners expect more intensive and comprehensive NFE programmes. Some of the changes are, although not curriculum objectives, but effect of concomitant learning, and more effort is required to establish teacher-learner rapport which appears to be a weak link.

Integrated Model

In Rajasthan, 9% learners of SC/ST and below 11 years have been attending the NFE centre for more than a year; 15% learners of SC/ST above 11 years have been doing so. The motivation factors have been enumerated as congenial atmosphere at the centre, liking of the fellow learners, instructors' behaviour, his teaching technique and organisation of teaching-learning activities. It has been reported by 22% of learners of SC/ST and 50% of other communities that their education has enabled them to help their parents intheir respective vocations, 24% of SC/ST and 57% of other communities have reported that it (education) has improved their performance day-to-day household duties, 85% say it has not made any impact on their ability to deal with people. The learners find difficultty in Mathematics (30%) while 50% do not face any difficulty and remaining have not responded. All of them want to continue their education further, of which 63% want to join the formal education system after completing NFE.

97% of the learners feel that they learn reading, writing with comprehension, 67% say they learn how to calculate 24% say they learn to make toys, 30% learn to play different games.

52% learners have expressed their keen desire for making arrangements for some more vocational training during the course to enable them to learn their livelihood. 25% female learners want tailoring and allied vocation.

The parents were also interviewed to find the effectiveness of NFE. 91% were males, 32% were SC/ST and 32% literates. 83% were agriculturist, 10% labours and the remaining are spread over to a number of professions e.g. carpentry, government services, small scale industries etc. 88% parents reported that they were motivated to send their children to NFE centres by the instructors, 9% were motivated by the Block Development Officer.

The parents have noticed somechange in habits of their ward-learners such as washing of hands before meals (58%), daily bathing and washing of clothes (90%), cleaning of teeth daily (74%), taking of food neatly (45%). 40% of the parents reported that their children have learnt to maintain the accounts 55% report letter writing by them, 13% say they represent the family outside, 55% report that they help their youngers with their studies and 42% say that they have started shouldering the responsibility of the family. Further 50% say that they can express themselves better than before, 48% say they are more regular in life, only 4% participate in family decision making, 69% report that they (learners) want to study more, 37% observe appropriate behaviour with peer group and others.

85% parents feel that 'mid-day meal' (!) to all and free uniforms to poor should be given. Scholarship to SC/ST children and to girls should be provided. Prizes may be awarded for excellent performance. They also suggest that the honorarium to instructor should be raised (45%), adequate lighting arrangements be made (22%), sufficient accommodation

be provided (20%), proper games facilities (20%), supply of instructional material (40%), effective supervision (40%), wide publicity to the programme (40%) and adequate certification (40%).

None of the employers interviewed belonged to SC/ST, and all were males. The employers belonged to professions other than the specified groups, such as contractor and service. In all only two employers were interviewed and both of them agreed that the learners were now more regular, more efficient, take more interest in work, and behaviour with others had improved, have positive attitude towards employers, readily accept suggestions etc. One of the employers feels that, besides other things suggested by parents, vocational training should form a part of the instructional programme.